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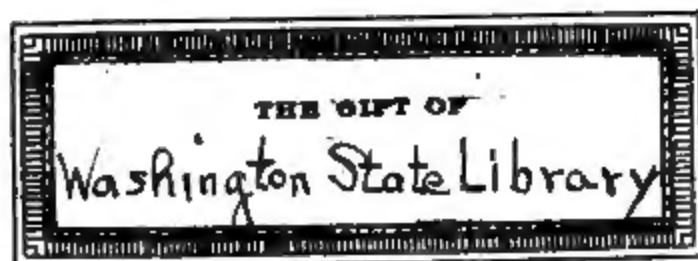
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Washington (State)

SECOND REPORT

OF THE

Department of Agriculture

OF THE

State of Washington

TO THE

GOVERNOR

July 1, 1914, to June 30, 1916

"The productiveness of the earth must increase from generation to generation, this also is his obligation."

OLYMPIA, WASH.
FRANK M. LAMBORN  PUBLIC PRINTER
1916

LETTER OF TRANSMITTAL.

STATE OF WASHINGTON,
DEPARTMENT OF AGRICULTURE.

OLYMPIA, June 30, 1916.

To His Excellency, Ernest Lister, Governor of the State of Washington:

SIR: In compliance with law, I have the honor to submit herewith the Second Report of the Department of Agriculture, covering the period from July 1, 1914, to June 30, 1916, inclusive.

Your attention is respectfully directed to the valuable service rendered the Department by Dr. Ira D. Cardiff, Honorable E. E. Flood, and Dr. Granville Lowther, members of the Advisory Board, who have all assisted your Commissioner to the fullest possible extent in meeting the many perplexing problems with which we have been confronted from time to time.

This service, which has been had at practically no expense to the taxpayers of the state, has been of inestimable value and is gratefully appreciated.

Respectfully submitted,
H. T. GRAVES,
Acting Commissioner of Agriculture.

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ORGANIZATION OF DEPARTMENT.

Advisory Board.

Governor Ernest Lister, Chairman, Olympia, Wash.

Hon. E. E. Flood, Rosalia, Wash.

Dr. Granville Lowther, North Yakima, Wash.

Dr. Ira D. Cardiff, Pullman, Wash.

Dr. H. T. Graves, Acting Commissioner, Secretary, Olympia, Wash.

Department Officials.

H. T. Graves, B. S., D. V. S., Acting Commissioner, in charge of Dalry and Livestock, Olympia, Wash.

T. O. Morrison, B. S. Agr., Assistant Commissioner, Division of Horticulture, Olympia, Wash.

J. J. Higgins, Assistant Commissioner, Division of Foods, Feeds, Fertilizers, Drugs, Oils and Bakery Inspection, Olympia, Wash.

Chemists.

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Prof. Chas. W. Johnson, Seattle, Wash.

Prof. Geo. Olson, Pullman, Wash.

Bacteriologists.

Dr. E. P. Fick, Seattle, Wash.

Edith Hindman, Seattle, Wash.

Seed Analyst.

Katherine G. Stone, Olympia, Wash.

Veterinary Inspectors.

Dr. R. J. Donohue, Seattle.

Dr. G. F. Overhulse, Olympia.

Dr. J. H. Martin, Spokane.

Dalry Inspectors.

C. S. MacBride, Spokane.

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A. D. Fish, Seattle.

Marcus Dey, Seattle.

Horticultural Inspectors.

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Luke Powell, Prosser, Wash.

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J. H. Brislawn, Everett, Wash.

F. N. Rhodes, Seattle, Wash.

Henry Huff, Sumner, Wash.

C. W. Gilbreath, Walla Walla, Wash.

I. R. Fletcher, Camas, Wash.

O. T. Clawson, Wenatchee, Wash.

*Deceased, Feb. 20, 1916.

Food Inspectors.

Will H. Adams, Spokane, Wash.

Mrs. W. H. Coffin, Tacoma, Wash.

I. J. Minnick,* Spokane, Wash.

Drug Inspector.

Edward L. Jones, Ph. G., Spokane, Wash.

Oil Inspectors.

S. P. Wilson, Chief Inspector, Seattle, Wash.

M. B. Laucks, Seattle, Wash.

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Office Force.

F. B. Fuller, Secretary, Olympia, Wash.

S. R. Holcomb, Weather Observer and Clerk, Olympia, Wash.

Miss Ruby Boucher, Stenographer, Olympia, Wash.

Miss Lillian Arens, Stenographer, Olympia, Wash.

*Deceased, Feb. 20, 1916.

INTRODUCTION

ORGANIZATION OF DEPARTMENT.

Prior to the session of the State Legislature of 1913, the duties of the Department of Agriculture of the State of Washington, as at present constituted, were distributed among a number of independent departments. Each of these departments had its separate head and each performed its independent functions as defined by a number of state enactments. In some particulars several of these departments occupied more or less competitive fields. While each had assigned to it specific duties different from the others, nevertheless there were occasions when their activities to a greater or less extent were duplicated.

It was found that the operation of a great number of independent departments added to the expense of administration. Certain fixed charges were necessary in connection with each department, which, while not large perhaps with respect to any one, nevertheless in the aggregate added considerably to the expense of the taxpayers. This situation resulted not only in more or less confusion, but it was open to numerous other objections which the legislature in the year 1913 remedied upon the Governor's recommendation.

Naturally, also, there was a lack of co-operative effort and a tendency among the various departments to outdo each other in their respective fields, which created a situation obviously unsatisfactory when viewed from the standpoint of modern administrative methods.

Each of these various departments found it necessary at the recurring sessions of the legislature to make appeal for funds for the conduct of its work. A natural consequence of this condition was that some departments, the heads of which were more active or more successful in presenting their case to the appropriation committees, were able to secure larger appropriations than perhaps were necessary in the discharge of their duties, while others for a contrary reason were not sufficiently equipped to properly carry on their work.

One objection to the former system was found in the fact that the several departments were scattered about the state at different points. The locations of their respective headquarters were unknown to the large majority of citizens and hence it was a matter of difficulty for the people whom the state sought to serve to come into close and intimate contact with the agencies designed to serve them. These and other objections which from time to time manifested themselves resulted in a definite demand upon the State Legislature for a consolidation of a number of departments whose duties as defined by the state laws were to a great extent closely connected. This movement as above intimated climaxed in the year 1913 when the State Legislature adopted the act whereby the present Department of Agriculture of the State of Washington was created.

The department thus brought into existence is vested with all of the powers and is required to perform the duties previously appertaining to the following offices: The State Veterinarian, Dairy and Food Commissioner, Commissioner of Horticulture, State Oil Inspector, Bakery Inspector, State Fair Commission, and in the Washington State College, with respect to the licensing and registration of jacks and stallions, and with respect to the duties of the director of the Washington Agricultural Experiment Station as regards concentrated commercial feeding stuffs and commercial fertilizers used for manurial purposes.

Upon the consolidation of the above offices in the one department an investigation and close analysis of the duties required of them disclosed the fact as indicated above, that in several cases their activities were closely related. For convenience of administration, therefore, and for the purpose of securing added efficiency at the least possible expense, the work of the several offices was grouped around four general subdivisions, each having a deputy of the department at its head. These four divisions are known as, first, Dairy and Live Stock Division; second, Division of Horticulture; third, Division of Foods, Feeds, Fertilizers, Drugs, Oils and Bakery Inspection; fourth, the Division of Agriculture. Through the agency of these four divisions the many and important duties assigned to this department in the act of 1913 are performed. The general powers of the Commissioner authorize him to publish and to distribute bulletins dealing with the various phases of departmental activity and for the purpose of informing the public with regard to the work and results accomplished by the Department.

The Commissioner of Agriculture is the executive officer of the state for the enforcement of the regulatory laws relating to agriculture, and to the agricultural resources of the state. He is charged with the enforcement of numerous important police regulations having to do with the food supplies offered for sale to our citizens, to the drugs which they purchase, to the output of the bakeries scattered through the several hundred cities and towns of the commonwealth, and in many other ways the Department is intimately connected with the preservation of the health and well being of our people.

It is not contemplated in the act and it has not been the practice of the Department to enter the field already occupied by the state and government experimental stations. The problems of a more or less technical character touching upon the question of farm methods which are presented to the modern farmer who desires to get the best results from his operations belong to experts trained for that particular work. Such experts are maintained at the State College and the various experimental stations and to them are referred the matters which naturally would come under their consideration. It is a pleasure to state in this connection that the Department has at all times enjoyed the closest co-operation with the State College and the officials of the

various experimental stations who have invariably responded promptly and satisfactorily to every request for assistance or information that has been referred to them.

PURPOSE OF INTRODUCTORY CHAPTER.

It will be apparent from the foregoing that the Department of Agriculture is assigned a wide scope of activity. Its duties as defined by statute are many and varied. Reaching out from the state capitol the ramifications of the Department touch the citizens directly in the most remote corners of the state. It is believed that every citizen has a personal interest in the work of this Department. He helps through the taxation of his property to pay for its support. He has an interest in the success of its work from the standpoint of the preservation of the public health. He has a large interest in the work the Department is required to do in the inspection of the food products which are consumed on his table, and it is not stretching the facts by any means to assert that the comfort and well-being, and in many cases the lives of our citizens are dependent upon the proper discharge of the duties assigned by the Legislature to this Department.

The varied activities required of the Department suggest also in some measure the character and extent of the state's resources and industries. Realizing that this report will go to many who are not familiar with the natural conditions and the development that has taken place in this state, it has been deemed wise to present in connection with this report a brief statement descriptive of the climate, the soil, the products and industries of Washington, and of the people who are engaged in developing its manifold resources.

The purpose in view is to connect up for the benefit of the reader the duties required of this Department with the field in which those duties are performed. It is believed, for example, that the work of the Division of Dairying and Livestock will be better understood and more fully appreciated if some detailed insight is presented with respect to the extent and scope of the dairy and livestock industry.

A great many of the states of the Union maintain a regular department of horticulture. But how many of them can boast a single county with sixty thousand acres of commercial orchards annually contributing their products to the world's markets? The work of the seed inspector is common to nearly every state, but the importance of that work as related to our own commonwealth will appeal more strongly to the reader who is conversant with the acreage, the capital, and the labor employed in the great grain-growing industry of Washington. The following pages, therefore, will offer to the reader in as concise a form as possible such facts and figures as will enable him to visualize the field of activity in which the State Department of Agriculture is engaged.

The information presented has been secured from official and other reliable sources and will be found readily capable of verification.

NATURAL DIVISIONS OF THE STATE.

The State of Washington, by reason of several outstanding topographical features, is naturally divided into districts possessing widely varying characteristics. Not far distant from the Pacific Coast is the Olympic range of mountains which gives the name to and forms the dominant physical characteristic of the great district known as the Olympic Peninsula. Farther east the Cascade Mountains extend in a general northern and southern direction, forming what may be termed the backbone of Washington, dividing the state into regions vastly dissimilar in climate, soil, and other natural conditions. The Columbia River, a third important boundary line, enters the state in its northeast section and traverses its entire width in an irregular course, entering the Pacific Ocean at the extreme southwest corner. Based upon these natural lines of division, the state may be subdivided into the following sections:

First, the district located between the Pacific Ocean and the Olympic Mountains. Second, the great natural basin which lies between the Olympic and Cascade ranges. The chief physical feature of this district is the inland sea known as Puget Sound. Third, the Cascade Mountain range with its peaks surmounted by a perpetual covering of snow, forming the source of many of the streams which water the fertile valleys both in Eastern and Western Washington. Fourth, the territory north of the Columbia River, an extensive rolling country partly timbered, which has been given the name of the Okanogan Highlands. Fifth, the Columbia Plains lying south of the above district and east of the Cascade Mountain Range. Sixth, the Blue Mountain district which is located in the extreme southeastern section of the state. Seventh, a series of wide hills and valleys originally heavily timbered, located in the southwest section.

As may be expected from the widely different topographical conditions suggested by the foregoing, the industries and resources of the state are many and varied. These will be treated in turn in subsequent pages.

SOILS OF DIFFERENT SECTIONS OF THE STATE.

The Cascade Mountain range, by far the most important of Washington's dividing boundaries, separates the state into two great sections commonly known as Eastern and Western Washington. The soils of these two sections are of differing origin and likewise different in character and composition and with respect to the purposes for which they are best adapted. Generally speaking, the soils of Western Washington are of glacial origin, while the soils of Eastern Washington had their basis in the outflow of enormous volcanoes which had their period of activity in bygone ages.

Western Washington.

Sand, clay and gravels are the characteristic features of the soil which covers the mountains and foothills of Western Washington. In some places these deposits remain today much as they were left as the result of the original glacial movement. In the valleys, however, where the rocks have disintegrated and become pulverized by the passage of time and the processes of nature, aided by the continued deposit of silts from the rapid flowing mountain streams, and mixed with accumulations of decaying vegetation, a soil formation is presented which has proven extremely attractive to the farmer and truck gardener. At the mouth of several of the Western Washington streams where topographical conditions are favorable, a mixed soil made up of silt deposits combined with decayed organic matter has accumulated, and through actual demonstration has been found to yield remarkably of all manner of grain, grass and vegetable crops.

In some sections of Western Washington where lakes and marshes formerly covered the ground, now will be found a peat soil which under certain conditions has been found to yield profitable crops.

Soils of Eastern Washington.

As already noted, the characteristic feature of the soil of Eastern Washington is its volcanic origin. Great stretches of country lying eastward from the Cascade Mountain range are covered to a vast depth with what is commonly termed volcanic ash. Like the soils of Western Washington, the original conditions have been greatly altered through the passing of the centuries. Heavy silt deposits in many places, the disintegration of igneous rocks, and the decay of vegetable matter have all combined to add richness and fertility to these soils.

On the highlands and in the northern section of Eastern Washington, there has always been sufficient rainfall to produce abundant native forage crops, which in the early days of the state's development offered tempting fields to stock men. The opportunities thus presented were early seized and improved to the utmost. In the lower levels and river valleys of Eastern Washington, where the rainfall is insufficient for practical farming purposes, vast stretches of the original volcanic ash presented themselves to the early settlers of the state, an unbroken sagebrush plain. This soil occurs in depths varying from two to three feet to as much as seventy-five feet. In its natural condition it offers a parched and forbidding aspect to the observer, but when the life-giving streams from the mountains are turned upon its barren surface this soil has been found so productive as to be the marvel of all who are familiar with its possibilities.

There are evidences also in many sections of Eastern Washington of vast areas which formerly must have been great inland lakes. The subsiding waters, together with the changing courses of the streams which flow through these districts, leaving their rich silt deposits to

cover the land, have given to the farmers and fruit-growers of the state a legacy of almost incalculable value.

The foregoing treats of the soil conditions of the state only in a general way. Localities will be found both in Eastern and Western Washington where the conditions above described do not apply, but for the purposes of this report, the limitations of which forbid entering greatly into detail, what has been said will probably be sufficient.

CLIMATIC DIFFERENCES AND RELATION OF SAME TO INDUSTRIES.

It has been observed that the Cascade range of mountains divides the state into two sections possessing very different characteristics. Just as we find that the soils of Eastern Washington are different in origin and adaptability from the soils of Western Washington, so we find a marked difference in the climatic conditions of the two regions.

Western Washington.

The characteristic climatic features of Western Washington are its heavy annual rainfall and its equable average temperature, which is influenced to a large extent by reason of close proximity to the warm currents of the Pacific Ocean.

Originally this portion of the state extending from the Canadian border on the north to the mouth of the Columbia River on the south, was one great evergreen forest interrupted only by the various indentations of the ocean which penetrate deeply into the state, and by the numerous streams which flow from the snowclad tops of the mountains to the sea. The gigantic firs and cedars standing in solid array over uncounted miles of territory were the product in large measure of the copious rains which fall in this section during a large portion of the year. The precipitation, however, varies largely in different parts of the western section of the state. The moisture-laden winds from the Pacific Ocean find natural avenues of access to the interior through the mountains and by way of the courses of the various streams. The districts which are directly in line with the course of the prevailing winds naturally receive the greater amount of precipitation. There are a number of isolated sections so located with reference to the mountains and the wind currents that their annual precipitation is only slightly greater than is found in the semi-arid sections of Eastern Washington. In such sections it has been found profitable to construct systems of artificial irrigation to enable the farmers to mature their crops. Other districts not many miles away may have a rainfall annually of from fifty to sixty inches or more.

Some idea of the annual rainfall in different sections of Western Washington may be gained from tables of observations as taken by the agents of the U. S. Weather Bureau. The following figures represent averages of annual precipitation for the counties named covering a period of ten years or more: Grays Harbor County, 88.55 inches; sta-

tion, Aberdeen. King County, 47.81 inches; stations, Seattle, Snoqualmie Falls, and Vashon Island. Kitsap County, 42.47 inches; station, Eagle Harbor. Mason County, 83.41 inches; station, Union City. Pierce County, 58.22 inches; stations, Tacoma and Ashford. Thurston County, 53.86 inches; stations, Grand Mound and Olympia. Whatcom County, 37.47 inches; stations, Bellingham and Blaine.

In general, the climate of Western Washington is mild and equable. Extremes of temperature are rarely experienced. The summers, owing to the refreshing ocean breezes, are delightful and Western Washington with its numerous salt water bays and inlets, its beautiful lakes and mountains within easy access by rail or motor car, is fast achieving national fame as a great summer playground.

As the forests have receded before the attacks of the loggers the lands thus denuded of their timber are rapidly being converted into comfortable farm habitations. The climatic conditions naturally exercise an important influence upon the varieties of crops produced. These will be referred to in detail elsewhere in this report.

Eastern Washington.

Varying conditions of climate are found in Eastern Washington, governed in a large measure by the differing altitudes of the various sections. The outstanding climatic characteristics of the entire region are long, hot summers and moderately cold winters, with an annual rain precipitation varying from almost nothing to a sufficient fall to insure regular annual crops of wheat and other products far above the average, both in quality and quantity. In the higher levels in the north-central and the southeastern portions of the district, farming without irrigation is practiced upon an extensive and ever-increasing scale. In the semi-arid portions of Central Washington, where the annual rainfall amounts only to a very few inches, irrigation is essential to successful farming and the production of crops by this method has been in progress for the last fifty years.

The Cascade Mountain range is the dominating factor in determining the climate of Eastern Washington. These rugged mountains stand as a barrier to the moisture carrying winds from the ocean, seizing their burden and precipitating it upon their own rocky slopes, either in the form of rain or snow. It is in consequence of this condition that so large a portion of Eastern Washington must remain unproductive until it is reclaimed through the construction of artificial systems of irrigation. At times in Eastern Washington extremes of heat and cold are experienced. But the low humidity prevents any disagreeable consequences from the high temperatures experienced in the summer, and the nights, even in the hottest months, almost invariably yield a refreshing coolness. Sufficient snowfall is common during the winter months to make sleighing an enjoyable recreation for periods ranging from two weeks to two months.

The following figures taken from the weather bureau reports indicate the average annual rainfall in the respective counties covering observations through a period of ten years or more: Adams County, 11.90 inches; station, Lind. Asotin County, 16.11 inches; station, Zindel. Chelan County, 14.8 inches; stations, Lakeside and Wenatchee. Spokane County, 18.23 inches; station, Spokane. Walla Walla County, 17.58 inches; station, Walla Walla. Whitman County, 22.20 inches; stations, Colfax, Pullman, Rosalia. Yakima County, 9.35 inches; stations, North Yakima, Sunnyside, Fort Simcoe.

It should be noted that the precipitation of snow is not included in the foregoing statistics.

AGRICULTURE.

Agriculture has been described as the basis of all industry. Certainly in the absence of men to till the soil and force the earth to yield of her bounty, humanity would have but short life upon this earth. As in other newly settled countries, the early comers to the State of Washington sought almost immediately to ascertain the adaptability of the soil and climate in this state to the production of the staple food products necessary to human sustenance. Fortunately for them and for those of us who have come after, their experiments and the experience of succeeding generations in the same line of effort, have proven eminently satisfactory and successful. Speaking in a broad sense, agriculture includes all of the various industries which have their basis in the tillage of the soil. Horticulture, stock growing, poultry raising, bee keeping, etc., are all phases of agriculture. This chapter, however, will be confined to a consideration of the resources and development of this state with reference to grains, grasses, roots, and similar crops, leaving the treatment of these other subjects for further subdivisions of this report.

CEREALS.

Wheat.

The annual production of wheat in the State of Washington ranges from thirty million to forty million bushels. While there are a number of states that surpass our own in total quantity of production, Washington has for years maintained the lead of all the states in the Union for the highest average yield of wheat per year per acre.

Those portions of Eastern Washington which enjoy a rainfall sufficient for the maturing of crops have long been noted for their large yields of this cereal. Lands on the plains of this portion of the state, which in early years were unable to find a purchaser at 50 cents or \$1.00 per acre, quickly took on a twenty-fold value when experimental work had demonstrated their fitness for producing wheat. In the country south of the big bend of the Columbia River a great wheat-growing industry has been in process of development for many years. Likewise, in the rich Palouse and Walla Walla countries wheat growing has been

a source of prosperity to the people almost since the date of the early settlements. It is not uncommon in these latter sections of the state to see the farmers plowing around the knolls and hills which are characteristic of the country, until the very summits are made ready for the reception of their seed.

As has been previously noted, the soil of this region is of volcanic origin. Repeated cropping and cultivation apparently has had small effect upon the producing capacity of this soil. Under the influence of continued plowing and harrowing and moistened by the rains and snows, it becomes more compact and furnishes annually a better seed bed and presents greater resistance to moisture evaporation. Somewhat removed from the lands which are capable of yielding an annual crop are others where the farmers can count upon a fair yield only once in a period of years. The introduction, however, of improved dry farming methods upon these lands is having the effect of converting them from idle sagebrush wastes into productive profit yielding farms.

The wheat grown in the districts thus far referred to is ordinarily of a high milling grade. It finds ready market in the flour mills of Washington and Oregon, and the surplus is annually absorbed through transportation by ocean to the world's great wheat markets.

In recent years wheat production on a considerable scale has been practiced in some of the irrigated sections of the state. Under favorable conditions, yields of wheat on irrigated land exceed sixty bushels to the acre. The wheat thus grown, however, is not usually regarded as best suited for milling purposes, but finds a ready market as feed for stock and poultry. Some soft wheat, utilized for like purposes, is also grown on the flat alluvial lands of the river deltas of Puget Sound. Records of one hundred bushels to the acre of wheat grown in these latter localities are not uncommon.

Wheat growing has proven one of the most staple and profitable of all the industries of Washington. Prices have ranged uniformly high in recent years, and a prosperous and contented population is characteristic of all the important wheat growing sections of the state.

The principal varieties of wheat grown are Bluestem, Club, and Forty Fold.

The leading wheat producing counties of Washington are Whitman, Lincoln, Adams, Walla Walla, Douglas, Yakima, Spokane, Asotin, Columbia, Garfield, Klickitat, Kittitas, and Franklin.

Oats.

This important cereal, while not grown to the extent that wheat is raised, nevertheless, is an important contributor to the sum total of the output of Washington farms. Oats are produced more extensively in Western Washington than in Eastern Washington. A great industry in the production of oats for human food purposes has been developed on the broad alluvial flats near the mouths of the Skagit and other Western Washington streams. The peculiar conditions of soil

and climate in these localities seem to combine to produce all of the essentials for first class milling oats. The consumption of this cereal for the purpose of manufacture into breakfast foods has grown immensely in recent years. The objection that is raised against wheat grown in districts subjected to a heavy rainfall do not apply as related to oats grown under similar conditions. While soft wheat is not best adapted to the production of first class flour, oats that are grown in the humid sections of the state have been found exceptionally well adapted to rolling and for manufacture into various forms of table food. The lands above referred to frequently average one hundred bushels of marketable oats to the acre.

It should not be understood that the growing of oats is disregarded by the progressive farmers of Eastern Washington. The necessity of a plentiful supply of this cereal which still retains the premier position as an ideal ration for horses necessitates the production of oats in Eastern Washington upon a considerable scale. The advantage, also, rests with the farmers in this latter part of the state by reason of the fact that the preparation of the virgin soil for the reception of seed is comparatively an inexpensive process. In Western Washington the item of land clearing is laborious and costly. Logged-off lands must be prepared for crop purposes by the removal of the stumps left by the loggers, either by blasting or through a tedious process of burning them out.

Under the most favorable conditions this is an expensive undertaking. The cost of clearing an acre of land will run from fifty dollars to one hundred dollars, depending upon the size and number of stumps to be removed. It is a matter often of years of continued labor and expensive outlay to place a tract of land in fit condition to produce any kind of crop.

In Eastern Washington an entirely different condition prevails. Where the land originally was covered with a growth of bunch grass, the sod needs only to be deeply turned to convert the field into a receptive seed bed. In those sections where the original vegetation was confined to a growth of sagebrush, the process is a little more laborious and slightly more expensive. The sagebrush must be broken down, dragged into piles and burned, before the plow can be applied. But the total cost of this operation often will not exceed \$2.50 per acre, and a quarter section of land can be cleared and made ready for the plow in a very brief time.

In the districts of Eastern Washington where farming under irrigation is practiced large areas of land which are unsuited to orchard purposes are being utilized for the production of oats. It has likewise been found that large areas of sub-irrigated lands, that is, lands which receive moisture through drainage from lands developed under regular systems of irrigation, will often produce large and profitable crops of oats.

On the irrigated lands where sufficient water supply is readily available, the yield of oats will equal that obtained upon the Western Washington flats. In keeping with other cereals, the price of oats has been maintained at a high level for a number of years and the farmer who comes to harvest time with a good average crop of this cereal is assured a ready market and a profitable price for his products.

Corn.

Until recent years, corn has not been regarded as a profitable crop in this state. The uniformly cool nights which prevail throughout Western Washington during the growing season are a bar to successful corn culture on anything approaching the scale maintained in the eastern and central corn belt. Sweet corn, for table use, is grown quite generally by market gardeners in the vicinity of all of the cities of the West Side, and both with respect to quality and acreage yield, it is a satisfactory crop. Field corn for silage purposes is grown to some extent, but generally speaking, the production of corn for commercial purposes is not attempted on any considerable scale in Western Washington.

In the warm irrigated valleys of Eastern Washington, considerable areas are now planted annually to this grain. The nights in these sections are warmer and the long hot days of summer, coupled with the advantage of a plentiful water supply, always under control, surround the grower with conditions that insure a most bountiful yield. The earlier experiments were not altogether satisfactory, even in the highly favored irrigated districts. But it was soon discovered that through proper care in seed selection, and particularly through the development of an acclimated variety, results could be obtained approximating the best yields in Iowa and Illinois.

In the Yakima Valley where corn is grown at present on a considerable scale, 20 tons to the acre when cut for silage, and 60 to 75 bushels to the acre when the grain is allowed to go to harvest are not uncommon. From the above named section, where the most successful results in corn culture have been achieved the practice of devoting a portion of the farm area to corn is rapidly spreading through all of the irrigated districts of Eastern Washington.

Coincident with the production of corn, there has come a great impetus to the dairy and hog-raising industries and throughout the more developed sections of Eastern Washington a modern silo is coming to be regarded as an essential feature of the farm equipment.

For the encouragement of the farmers in devoting more time and attention to the production of this cereal the custom has grown up in the past few years of holding annual corn shows in the fall at numerous localities in the irrigated belt. At these shows the corn growers exhibit the best specimens from their respective fields and compare notes as to the most desirable varieties to plant under the conditions of soil and climate that prevail in their several sections. Three of

such shows were held in the Yakima Valley alone during the season of 1915 and the exhibits offered for public inspection were pronounced by experts to be worthy in every particular of comparison with the products of the most famous corn belts of the middle states.

Barley.

In the extreme southeastern section of the state, more particularly in Garfield, Columbia, and Walla Walla counties, the production of barley in recent years has assumed important proportions. Tests made by the farmers in this section have demonstrated in many cases that barley is a more profitable crop for them than wheat. This grain is equal in value for feeding purposes to corn and is rapidly growing in favor with stock growers, particularly in Eastern Washington where the source of supply is reasonably close at hand. Other sections of Eastern Washington, and to some extent in Western Washington, are likewise capable of producing profitable crops of barley. On the west side some barley is raised, chiefly designed for feeding poultry and hogs.

Prior to the enactment of legislation in this state whereby the manufacture of malt and spirituous liquors were entirely prohibited within its borders, the breweries consumed a large portion of the barley crop of Eastern Washington. The loss of this market, however, does not appear to have made any substantial difference in the area of land devoted to barley production, as there appears to be a demand for all the barley that our farmers produce.

Peas.

Conditions in Western Washington in the valleys and lower foothills are admirably adapted to the production of peas. Eastern seed men long ago discovered that a superior quality of peas is grown in this section of Washington, and several of the large seed firms are finding their source of supply for peas in this state.

Experiments have been made on the irrigated lands of Eastern Washington in growing peas adapted for canning purposes. Such experiments, where proper care has been given the crops, have invariably proven successful. Where the sowings are made early in the spring two full crops on irrigated land are easily obtainable. Reports made to large eastern canneries which have furnished seed for experimental purposes, have led them to an investigation of the possibilities of establishing large pea canning factories in Central Washington.

Grasses.

The lands, both of Western and Eastern Washington, have been found well adapted to the growth of a wide variety of grasses suitable for forage and hay purposes. Western Washington is well entitled to be called "evergreen," not only on account of its boundless forests of fir, cedar, and spruce, but likewise for the abundant growth of

grass crops which rapidly cover the logged-off lands when the timber men have completed their labors. Wild grasses flourish in this section equally with clover, bluegrass, and timothy, all of which are grown on a considerable scale. Weather conditions in Western Washington are more or less uncertain during the harvest season, and for that reason the major portion of the grass crops are consumed as pasture. The adaptability of the district to the production of these crops has greatly stimulated the dairy industry in Western Washington. Thousands of fine dairy cattle find their chief sustenance on the cut-over lands of the western portion of the state, which furnish bounteous pastures for a large portion of the year. This industry has grown to such proportions that the dairymen are not only able to supply the demands for fresh milk and cream for the cities of Seattle, Tacoma, Everett, Bellingham, and other large centers of population, but a sufficient surplus is produced to supply the demands of a multitude of creameries and of several large milk condensing plants.

The chief source of supply of the state for cured hay is found in the Kittitas and Yakima valleys of Eastern Washington. The first named section has long been famous for its splendid dairy herds and for the products of its creameries. This district annually produces a heavy tonnage of timothy, alfalfa, and mixed hay, the surplus product finding a ready market in the cities of Western Washington.

Farther down the Yakima Valley, notably in the lower portion of Yakima County, will be found vast fields devoted to the production of alfalfa. Three cuttings of this valuable forage crop are made annually with yields running from four to six tons per acre. In the more favored sections the fields are pastured after the third cutting, thus giving the owners an added source of revenue. On the Yakima Indian Reservation, where a large portion of the alfalfa crop of Yakima County is grown, thousands of heads of cattle are wintered annually, their principal ration consisting of alfalfa hay. That portion of the crop which is not sold to feeders or consumed upon the farms of the growers, finds a ready market among the dairymen of Western Washington who find it necessary to supplement their pasturage with liberal supplies of alfalfa. The prevailing price for alfalfa hay, baled and on the cars at point of shipment, ranges at about ten dollars per ton. First class timothy hay baled and on the cars averages the grower from fifteen to seventeen dollars per ton. The prices above given apply during years when normal conditions of supply and demand prevail. For 1915-16, an unusual situation has presented itself. The European war and the general tendency toward higher price levels of all farm products, have been factors in stimulating bidding for the Washington hay crop and the growers have enjoyed better returns than for several previous seasons.

Alfalfa is also a favorite cover crop with the fruit growers of practically all of the orchard districts of eastern Washington, and from this latter source a considerable annual tonnage is harvested.

In most cases alfalfa thus grown is utilized on the premises of the producer.

HORTICULTURE.

Horticulture is one of the several rapidly developing industries of Washington which have their origin in the tillage of the soil. The production and marketing of fruit upon a commercial scale has been carried on, comparatively speaking, for only a brief number of years. It is true that fruit has been grown in this state since the days of the earliest settlements and it is not a matter of difficulty to find in Washington small apple and cherry orchards considerably older than the state itself.

The entrance of the state into the field of commercial fruit production, however, may roughly be said to date from the time when irrigation began to be practiced upon a considerable scale. It is not to be assumed from this that all of the fruit produced in Washington is grown upon irrigated land. Both of the great divisions of the state commonly spoken of as Eastern and Western Washington, the boundary line between which is formed by the Cascade range of mountains, have been found adapted to fruit growing. In Eastern Washington the great bulk of the fruit lands are under irrigation. In Western Washington a different condition prevails. The lands in this latter section devoted to fruit are located for the most part in the fertile river valleys and on the islands of Puget Sound.

A distinction to be noted at this point is the difference in character of the fruit produced in the two grand divisions of the state. Generally speaking the fruit districts of Eastern Washington are given over largely to the production of orchard fruits, such as apples, pears, peaches, apricots, etc. Grapes are also successfully grown upon a considerable scale in this part of the state. Western Washington, while it boasts the production of excellent tree fruits, has been found a more profitable field for the development of large acreages of berries. The most important of these crops are red raspberries, strawberries, loganberries, and blackberries. On some of the bog lands of the southern part of Western Washington cranberries are grown and are rapidly developing into an exceptionally profitable crop.

Scope of Industry.

Fruit production fluctuates perhaps in a greater degree than other crops which engage the attention of the tillers of the soil. Washington, in common with other fruit-growing commonwealths, has its years of maximum fruit crops and likewise has its years when adverse weather conditions, late frosts, and other disadvantages which are the common lot of the fruit growers tend materially to cut down the yield.

The industry, however, at the present time is so firmly established and the fruit districts are so widely distributed throughout the state that even in what are known as bad years an enormous tonnage of

both orchard and small fruits is annually contributed by this state to help supply the constant and never satisfied demand for fruit.

Probably it would be safe to say that Washington is producing and marketing fifteen thousand car loads of fruit annually, having a value between ten and twelve million dollars. From the fruitgrower's standpoint an "off year" does not necessarily mean an unprofitable year. A small crop ordinarily brings to the grower a higher price for his product than he realizes when his trees carry a maximum load of fruit. His expenses in such years for crates, picking, packing and for the care of his orchard are materially reduced. Generally speaking, however, the Washington fruitgrower who has been fortunate enough to locate his orchard on proved fruit land need not worry concerning his crop.

Advantages Enjoyed.

The fruit grower who has been fortunate in the selection of his location and in successfully bringing his orchard to the bearing stage enjoys certain marked advantages which are not common to other branches of farming. Horticulture is a highly specialized industry. It depends not so much upon the area of land under cultivation as it does upon the intelligence, skill and foresight which the orchardist applies to his business. The orchard districts of this state are made up in large measure of five, ten, and twenty acre tracts. The fruit-grower has his permanent home on his land. He has neighbors close at hand, has the benefit of excellent public schools, church facilities, rural mail delivery, telephone, and in many cases his home is lighted by electricity. His land has a higher valuation for taxation purposes than ordinary farm land and for that reason he usually enjoys the advantages of highly improved roadways and other public conveniences.

The highly developed fruit sections of the state almost invariably have easy access to flourishing trading centers. Small towns are scattered throughout the various fruit belts and a two or three mile drive usually brings the fruit-grower to the door of the merchant who supplies him with the commodities required for his orchard and home.

His routine of life is much the same as that which applies in any small American community. He knows nothing of the disagreeable isolation which was the lot of the farmers of bygone generations. He meets with his fellows at the school house or in community buildings where ideas and experiences are interchanged and where public questions are freely and profitably discussed. He is on terms of close acquaintance with the residents of the nearby towns and has access to the social advantages which are an essential feature of our American life.

It must not be thought, however, that the fruit-grower's pathway is one that is entirely strewn with roses. A considerable initial capital is required to warrant him a reasonable prospect of success in his undertaking. He must exercise the greatest of care and prudence in the selection of a location. If he undertakes the development of a

new orchard he must anticipate a series of from five to seven years before he can expect his venture to show a profit. He must be alert at all times in fighting the pests which wage incessant warfare upon his trees, and he is confronted at all times with the serious problem of finding a steady and profitable outlet for his products. The solution of this latter problem is being sought through various agencies. Fruit-growers associations and unions have been formed in practically all of the fruit growing sections. State and government experts have been enlisted in an endeavor to effect an economical and profitable distribution of the fruit crop throughout the large consuming centers of the country. Through the operation of these various forces, great progress has been made in disposing of the surplus products of the orchards of Washington. It must be realized, however, that fruit of any kind is a perishable product. In particular with reference to pears, peaches, berries and others of the softer fruits a market must be found for them at the time when they are best suited to meet the consumer's needs. These natural and unavoidable conditions surround the fruit industry with a greater or less degree of uncertainty. But on the other hand when conditions are favorable the same situation works largely to the advantage of the man who has prime fruit for sale.

The ideal condition for the fruit grower is found in cases where an area of land equal to or greater than that given over to the orchard is utilized for purposes of general farming. A pasture lot, a few acres in alfalfa, some corn, and a garden constitute an insurance policy against fruit failure or low prices which every experienced orchardist fully realizes and appreciates. Fruit growing is like any other industry. When the eggs are all in one basket the possibility of disaster must be accepted.

Fruit Districts of the State.

The principal fruit producing sections of Eastern Washington are the Yakima Vallay, the Wenatchee Valley, the districts surrounding Lake Chelan, the Methow Valley, the Okanogan Valley, the country surrounding and north of the city of Spokane, and certain portions of the extreme southeastern section of the state. In practically all of these districts the fruit lands are under irrigation. Along the Columbia River and other streams comparatively small areas have been found where excellent fruit is produced without the application of artificial irrigation. In Western Washington a large and growing berry industry has been developed in the Puyallup and Snohomish valleys and upon Vashon Island and others of the islands of Puget Sound. In Clarke County, located in the extreme southwestern section of the state, prune orchards have been developed upon a considerable scale and have been found an exceptionally profitable crop.

The above districts are mentioned particularly as representative locations where fruit growing is practiced upon a commercial basis. There is no county in the state which does not produce some fruit

and the home orchard is an accepted feature of rural life in practically all sections of Washington.

Fruit Districts of Eastern Washington.

The most highly developed fruit sections of Eastern Washington are located in the valleys of the several streams which find their origin in the snow capped peaks of the Cascade Mountains. These streams fed from the eternal snows which cover the mountain tops, supply the fertile lands of the river valleys with the moisture requisite to compel them to yield of the fertility with which they have been charged during the passing centuries.

The work of reclamation has not been confined entirely to the lands immediately adjacent to the streams. In many cases it has been found that the higher levels are better adapted to fruit growing than the low lands. Such areas are more likely to be immune from late frosts and usually are advantageously situated with reference to air drainage, which is a vital factor in successful fruit production. To water these higher lands it has been found necessary in some cases to install vast storage works in the headwaters of the streams. These reservoirs afford an unfailing supply of moisture under absolute control and available throughout the irrigation season to supplement the normal flow of the streams. It is by no means an uncommon sight in the river valleys of Eastern Washington to see the irrigation flumes clinging to the cliffs high above the river level carrying their precious burden of moisture to supply the favored fruit lands along the benches which lie high above and extend for miles back from the rivers.

The Yakima Valley.

The Yakima Valley produces by far the heaviest annual tonnage of any of the fruit growing districts of Washington. This valley embraces three large and important counties, namely, Kittitas, Yakima and Benton. The Yakima Valley is known as the original home of irrigation in the state of Washington. In the earliest day of territorial settlement farming by irrigation was practiced along the banks of the Yakima River and its tributaries. Small diversions of water were made by the farmers who tested and proved in that manner the marvelous capacity of the valley soil for banner crop production. Later on when more settlers arrived in the valley, communities joined hands in the construction of more ambitious irrigation canals. At a still later period large corporations entered the field, secured rights to water from the streams and began what may be termed the era of the construction of permanent irrigation projects. Finally the federal government under the broad powers conferred by the reclamation act, entered the valley with a view to the reclamation of all its vast irrigable area.

The government projects either under actual course of construction or already approved within the confines of the Yakima Valley

contemplate the reclamation of more than four hundred thousand acres of land. As a preliminary to the commencement of government work in the valley it was necessary to adjudicate all the then existing rights to water from the Yakima River and its tributaries. It was found upon investigation that the claims of private individuals and companies to water in the valley far exceeded in the aggregate the total minimum flow of the Yakima River. Before proceeding with any construction work the government undertook and successfully carried out a plan of allotting the waters of the river among the various claimants. When the various apportionments had been satisfactorily agreed upon, the Reclamation Service took over on behalf of the government what is known as the Sunnyside Project. This great project located in Yakima and Benton counties embraces close to one hundred thousand acres of first class agricultural land, most of which is now receiving water and is under cultivation. Four other projects are included in the government undertaking in the Yakima Valley, as follows: Kittitas Project in Kittitas County, area seventy thousand acres. Tieton Project in Yakima County, area thirty-five thousand acres. Wapato Project and extensions located in Yakima County, area one hundred and fifty thousand acres. Benton Project located in Benton and Yakima counties, area one hundred and eighty thousand acres. In addition to the foregoing, plans are also under development which will reclaim a large area of land located on the higher levels not at present reached by any of the existing irrigation systems.

Storage Works.

As already indicated, the government officials found upon the entry of the Reclamation Service into the Yakima Valley that the normal flow of the river had previously been appropriated. To meet the requirements of the vast projects above outlined, it was found necessary to undertake the construction of immense storage plants in the mountains to provide a supply of water available during the period of low water flow, which begins about the first of July. The plans for storage as outlined by the Reclamation Service, include the construction of impounding dams at Lake Kachess, Lake Keechelus, Bumping Lake, Lake Cle Elum, and McAllister Meadows, located at the headwaters of the Yakima River and of its larger tributaries. Several of these projects are now well along toward completion and the available water supply is well in advance of the actual development of the land. The Sunnyside and Tieton projects are now practically completed. The Wapato project, located on the Yakima Indian Reservation comprising with extensions a total of one hundred and fifty thousand acres of land, has already been partly reclaimed under a temporary system of ditches constructed by the United States Indian Service. Under these canals there are now farmed approximately sixty thousand acres of land. The permanent distributing system which ultimately will embrace the area already under

ditch, as also the remaining ninety thousand acres not yet reclaimed, was authorized at the last session of Congress. The initial appropriation for the work became available on the first of July of the present year, 1916, and is being expended in the construction of a diversion dam and in further extensions of the existing system.

Private companies organized prior to the commencement of government operations in the valley are still operating on an extensive scale, and the lands under these canals are heavy contributors to the annual output of Yakima Valley crops.

Products of the Yakima Valley.

While as has already been noted, the Yakima Valley is the heaviest contributor of any one district to the horticultural products of the state, fruit growing is by no means an exclusive occupation of the residents of the valley. The district may better be described as a diversified farming country. Alfalfa, clover and timothy hay are raised on a large scale. Grains of all kinds are produced on the irrigated and sub-irrigated lands, while cantaloupes, water melons, hops, onions, potatoes, truck garden vegetables, etc., are standard crops. An excellent idea of the purposes for which the lands of the Yakima Valley are adapted will be found from the following government reports of the last crop season for the Sunnyside and Wapato Projects:

Wapato Project.

IRRIGATED AREAS.

	Acres
Alfalfa (old)	20,549.00
Alfalfa (new, cut this year for first time)	743.50
Alfalfa (new, with grain)	4,650.75
Bearing orchard (clean cult.)	1,083.50
Bearing orchard (in alfalfa)	1,279.00
Bearing orchard (in grain)	151.00
Bearing orchard (other crops)	140.00
Young orchard (clean cult.)	380.00
Young orchard (in alfalfa)	109.00
Young orchard (in grain)	178.00
Young orchard (other crops)	182.50
Clover	1,471.00
Pasture	1,691.50
Barley	1,056.00
Wheat	3,864.50
Oats	1,428.50
Corn	1,961.85
Timothy	1,290.00
Rye	50.00
Cantaloupes and watermelons	1,162.75
Hops	80.00
Onions	142.00
Truck	768.00
Potatoes	2,321.25
Nursery	220.00
Miscellaneous	1,204.15
Total irrigated	48,157.75

SUB-IRRIGATED AREAS.

	<i>Acres</i>
Alfalfa (old)	725.00
Alfalfa (new, cut this year for first time)	8.00
Alfalfa (new, with grain)	86.00
Bearing orchard (clean cult.)	5.00
Bearing orchard (in alfalfa)	33.00
Bearing orchard (in grain)	26.00
Bearing orchard (other crops)	37.00
Young orchard (clean cultivated)	23.50
Young orchard (in grain)	10.00
Young orchard (other crops)	5.50
Clover	15.00
Pasture	791.50
Barley	114.00
Wheat	937.00
Oats	177.50
Timothy	13.00
Truck	17.00
Potatoes	10.00
Miscellaneous	7.00
Total sub-irrigated	3,039.00

SUNNYSIDE PROJECT.
DEPARTMENT OF THE INTERIOR, UNITED STATES RECLAMATION SERVICE.
WATER USER OR PROJECT—YAKIMA-SUNNYSIDE. YEAR OF 1916.

CROP	Area Acres	Unit of Yield	YIELDS				VALUES		
			Total	Per Acre		Per Unit of Yield	Total	Per Acre	
				Average	Max.	Min.			
Irrigated for production of this crop—									
Alfalfa and hay.....	26,042	ton	104,168	4.0	7.5	1.0	\$987,512	\$36.00	
Apples.....	3,564	pound	19,269,000	2,250.0	30,000.0	350.0	404,649	47.25	
Barley.....	312	bushel	9,865	31.6	50.0	10.0	6,413	20.54	
Clover and hay.....	298	ton	879	3.0	4.0	1.0	8,730	30.00	
Corn.....	8,165	bushel	489,900	60.0	125.0	25.0	238,940	36.00	
Corn fodder.....	1,052	ton	11,352	11.0	20.0	5.0	69,112	66.00	
Small fruit.....	464	acre	464	.....	.....	.....	64,980	140.00	
Garden.....	1,349	acre	1,349	.....	.....	.....	124,900	100.00	
Hay, except above.....	839	ton	2,517	3.0	4.0	0.5	22,653	27.00	
Hops.....	170	pound	408,000	2,400.0	3,200.0	1,200.0	44,880	264.00	
Oats.....	207	bushel	12,420	60.0	100.0	30.0	5,559	27.00	
Pasture.....	3,326	acre	3,326	.....	.....	.....	66,520	20.00	
Peaches.....	1,059	pound	6,236,320	5,900.0	40,000.0	450.0	77,842	73.60	
Pears.....	1,144	pound	8,084,600	7,057.0	60,000.0	1,000.0	129,358	113.07	
Prunes.....	206	pound	2,619,440	12,230.0	34,000.0	500.0	62,869	305.13	
Potatoes.....	4,025	bushel	872,300	217.0	600.0	80.0	392,535	97.50	
Wheat.....	1,535	bushel	31,900	20.0	40.0	10.0	28,710	18.00	
Less duplicated areas.....	3,875								
Total cropped.....	54,919		Total and average.....				\$2,750,826	\$50.08	
Other purposes—			AREAS				Acres	No. Farms	Per Cent of Project
Young orchard.....	6,108		Total irrigable area farms reported..... Total irrigated area farms reported..... Under water right applications..... Under rental contracts..... Total cropped area farms reported.....				68,840	2,558	62.11
Young alfalfa.....	777						68,607	2,558	60.10
Irrigated without crop.....	3,284						25,400	899	22.92
Town and building sites.....	4,891						41,207	1,654	37.18
Less duplicated areas.....	3,872								
Total other purposes.....	11,688						54,919	2,558	49.55
Grand total irrigated.....	66,607								

Fruit Lands.

Fruit growing on a constantly increasing scale is practiced in all three of the counties of the Yakima Valley. In the vicinity of the city of Ellensburg in Kittitas County and even closer to the foothills of the mountains the orchard industry has for years been a permanent and substantial contributor to the prosperity of the people of that district.

In Yakima County where are located extensive areas of approved fruit lands, the industry has assumed tremendous proportions. Radiating in several directions from the city of North Yakima are a number of fertile valleys, all of which are heavy contributors to the county's annual output of fruit. In the lower sections of the county the lands of the Sunnyside Canal, as will be noted from the foregoing statistics, are in large measure devoted to orchard purposes. On the Yakima Indian Reservation a considerable acreage is likewise devoted to fruit, although on a less scale proportionately than is found elsewhere in the county. Benton County also has a large acreage in orchard with numerous plantings made in recent years soon to come into bearing. In the Kennewick district, where the Yakima River joins with the Columbia, conditions have been found extremely well adapted to the development of the strawberry industry. The Kennewick berries come on to the market several weeks in advance of the Puget Sound crop and invariably bring the growers an attractive price for their product.

Evidence of the permanent character of the orchard industry in the Yakima Valley is found in the preparations which the railroad companies have made to handle the annual orchard output. Branch lines extend into the fruitgrowing districts with loading stations located at intervals of two and three miles, as best suits the convenience of the growers. Immense ice storage plants with a capacity of thousands of tons have been constructed at several points in the valley for icing the refrigerator cars which carry the soft fruit products of the valley to distant markets.

For the purpose of lending stability to market conditions, several large cold storage plants have been constructed in the valley and are an important factor in preventing violent price fluctuations during the harvest season.

The Wenatchee Valley.

The Wenatchee Valley, the second most important fruit producing district of Washington, is located in Chelan County. Like the Yakima Valley, its lands are of volcanic origin and are watered by streams which find their sources on the eastern slopes of the Cascade Mountain Range. The Wenatchee Valley has long been famous for the high grade character of its fruit, which is well known and appreciated in the markets of all the large eastern cities as well as in many foreign countries.

The valley is traversed by the Great Northern Railway for its entire length, and its eastern boundary is formed by the Columbia River which furnishes additional and important transportation facilities.

This valley is essentially a district of small farm and orchard holdings. Journeying from west to east, the traveler scarcely emerges from the foothills of the mountains when his vision is confronted by a panorama of orchards and garden fields, which continuously unfold before him for the entire remaining length of the valley.

Well improved roads have been constructed throughout the district, not only affording the land owners quick and comfortable access to the various trading centers, but likewise providing for the tourist a most enjoyable and attractive scenic trip.

The individual land holdings in this valley are uniformly small, particularly as applied to the fruit industry. The growers have found it profitable to devote their effort to the intensive improvement of five, ten, and twenty acre tracts. As a consequence the valley is thickly populated and the inhabitants enjoy all of the conveniences and comforts which the modern conception of rural life affords.

Prior to the development of the fruit industry in this section small diversions of water were made from the Wenatchee River, which is the principal stream of the valley. In this manner the farmers made a beginning in the production of alfalfa and other farm crops and paved the way for the later development which has followed. Small orchards were planted by many of the settlers and when these had developed to a producing stage the adaptability of the district to fruit growing upon a commercial scale became well established. Since that period fruit growing has developed upon an extensive scale, all under privately owned systems of irrigation. At the present time nearly all of the available irrigable land from the town of Leavenworth, well up in the mountains, to the splendid little city of Wenatchee, located near the junction of the Wenatchee and Columbia rivers, has been brought under ditch and is now in cultivation.

In addition to the famous red apples, other fruits such as peaches, pears, apricots, cherries and plums have been found profitable and are produced on an extensive scale.

Special Advantages.

Numerous special advantages accrue to the settler in this well favored section. Transportation to markets both east and west is right at hand. The climate is mild and equable and extremes either of heat or cold are of rare occurrence. The mountains are close at hand with numerous streams providing excellent fishing and camping sites, thus affording quick relief from the high temperatures of the mid-summer days.

The Entiat Valley.

The Entiat River is second in importance of the streams of Chelan County. It likewise rises in the Cascade Mountains some distance north of the Wenatchee River and finds its way to the Columbia, following a course somewhat parallel to the former. Irrigation is practiced along the banks of this stream and for a distance of fifteen miles above its confluence with the Columbia will be found a section of well-developed orchards and farm homes. Peaches are grown on a considerable scale near the Columbia River, and farther up the valley the finest grades of winter apples are standard crops.

This valley is considerably narrower than the Wenatchee Valley, but its lands, soil, climate and other features are generally similar in character.

Lake Chelan.

Although until recent years remote from transportation facilities, the lands adjoining this beautiful lake have for years produced considerable crops of apples and other fruits. In the earlier days the growers attained more or less success in apple production without resorting to artificial irrigation. It was found, however, that when the trees reached maturity they demanded a greater supply of moisture than the soil afforded and in recent years the better lands have been brought under well constructed systems of irrigation. Fruit growing is now practiced upon a commercial scale in this section with every prospect that it will continue to grow in extent and importance in coming years.

The Lake Chelan country is one of the most beautiful of Washington's many scenic assets. The lake itself is located in the heart of the mountains, surrounded by towering peaks, and attracts each summer a continually increasing number of tourists and campers. The recent completion of an extension of the Great Northern system from Wenatchee to Oroville has brought the district within reasonable reach of needed transportation facilities.

OTHER ORCHARD DISTRICTS OF EASTERN WASHINGTON.

The Methow Valley.

Still farther north of the Wenatchee Valley the Methow River, a turbulent mountain stream, rushes down from the Cascade summits to a point of junction with the Columbia at a distance of about sixty miles north of the city of Wenatchee. Fully fifty miles of the lower portion of this valley is well adapted to a wide variety of agricultural and horticultural purposes. In many places the valley is several miles in width, the lands gently sloping on either side of the river back to the foothills and presenting conditions of soil, drainage, etc., which have made the valley attractive to the fruit grower as well as to the general farmer. The irrigated lands in this district have been developed under private systems of irrigation. A plan has been worked

out whereby orchard lands have been brought into bearing by the irrigation companies for the owners and through this means and through the efforts of individual orchardists a large acreage chiefly devoted to the production of winter apples is now contributing to the annual fruit crop of Washington.

The Okanogan District.

The Okanogan District is a country of important but as yet largely undeveloped resources. It is characterized by high mountains, extensive rolling hill lands and fertile river valleys. The principal development from a horticultural standpoint has been along the last mentioned.

Some orchard development has taken place in what is known as the Brewster Flat country, a district comprising about fifteen thousand acres of bunch-grass land located near the confluence of the Columbia and Okanogan rivers.

The Okanogan Project.

Some miles to the north and bordering along the west bank of the Okanogan River is located what is known as the Okanogan irrigation project. This project, comprising somewhat more than ten thousand acres of land, has the distinction of being the first irrigation enterprise to be undertaken and brought to completion by the United States Reclamation Service within the confines of the State of Washington. The lands extend up and down the Okanogan River a distance of about ten miles. Originally they were covered with a heavy growth of bunch-grass and were a favored grazing section for herds of cattle and horses which roamed at will over their broad areas in the early days when the stockmen knew no restrictions of fence lines or government reservations. At the present time these lands are the center of a growing fruit industry devoted chiefly to the production of Winesap, Jonathan, Spitzenberg, Rome Beauty and Newtown Pippin varieties of apples.

Other smaller orchard districts occur along the Okanogan Valley, and at Oroville, located close to the Canadian border, an important irrigation project has been completed within the past year. The lands of this project have been thoroughly tested and found well adapted to the production of superior orchard fruits. With the completion of a permanent system of water supply this particular district has before it a period of certain development.

Northeastern Washington.

Stevens and Pend Oreille counties, located in the extreme northeastern section of the state, while as yet they are not heavy shippers of fruit, still present possibilities of importance to anyone surveying the state from a horticultural standpoint. In the valleys of these counties irrigation is practiced upon a small scale and particularly in Stevens

County a considerable orchard acreage has already been developed. In the Kettle Falls section a considerable acreage of land has been under irrigation for some years and is largely devoted to fruit. Along the Columbia River open stretches of land have been occupied and planted to orchard with results that have proven eminently satisfactory. In addition to the orchards actually yielding, there is a large acreage which will come into bearing in the next few years.

Spokane County.

Spokane County is the third largest county in the state with respect to the number of fruit trees in bearing and is equally important with respect to the area of young orchard that will begin producing within the next five years. The orchard districts for the most part are located in the valley of the Spokane River, extending in a generally eastward direction from the city of Spokane to the Idaho boundary. To the north of Spokane is a large area of cut-over pine lands that have been cleared and planted to orchard. Fruit grown in Spokane County is of superior quality and the orchards by reason of close proximity to several transcontinental railways and the markets offered by the city of Spokane, occupy an unusually favorable position. Among the principal fruit districts of this county may be mentioned Opportunity, the Vera project, the Spokane Valley Land & Water Company's project, and the Arcadia Lands.

The Big Bend District.

In the counties of Douglas, Grant and Lincoln, occupying what is commonly known as the Big Bend country, will be found numerous small areas that have been successfully developed for orchard purposes. These lands generally lie along the banks of the Columbia, in some of the watered coulees or on the rolling prairies where pumping plants have been installed to supply the necessary irrigation. The output of fruit from these counties for commercial purposes has been very small although each of them has considerable plantings which will shortly come into bearing.

Southeastern Washington.

In the southeastern portion of the state a group of counties comprising Whitman, Walla Walla, Garfield, Columbia and Asotin, are all substantial contributors to the total output of Washington fruit. Walla Walla county, the heaviest producer of orchard products of this group of counties, has a considerable irrigated area in orchard. The Blalock orchard tracts are located in close proximity to the city of Walla Walla. The water for these lands is largely supplied from deep artesian wells.

In the western section of the county is located the Burbank project, which is watered from the Snake River. Southwest of Walla Walla

are the Gardena tracts where the growing of Winesap apples has been established upon a considerable scale.

In the Clarkston district of Asotin County a large irrigation project has been developed and a considerable acreage has been planted to winter apples. Cherries, peaches, and grapes are likewise staple products of this locality. In the Cloverland section, located on a plateau two thousand five hundred feet above sea level, will be found another prosperous orchard district where cherries, plums, prunes, pears and apples are successfully grown.

Other Lands.

In this brief survey of Eastern Washington from a fruit-growing standpoint it has been impossible to describe or even mention all of the districts where fruit production has assumed commercial proportions. There are numerous other smaller sections in addition to those already mentioned where all of the standard fruits of the temperate zone are successfully grown.

FRUIT GROWING IN WESTERN WASHINGTON.

Fruit growing is one of the lesser industries of Western Washington. This vast region embracing the territory lying between the Pacific Ocean and the summits of the Cascade range of mountains is still covered in large measure by virgin growth of evergreen timber. Lumbering and its subsidiary industries, together with an ever-growing volume of commerce, both foreign and domestic, furnish the chief occupations of the people. With these are to be coupled a great fishing industry which employs thousands of men and is a substantial contributor to the prosperity of this section of the state.

As has already been suggested, however, there are considerable areas of agricultural land in the river valleys of Western Washington and on the uplands adjacent to Puget Sound, which having once been cleared of their timber growth have provided an inviting field for the tiller of the soil. The counties of Western Washington do not figure prominently in the fruit shipping statistics of the state when compared with such highly developed orchard districts as Yakima and Chelan counties. The cool, moist climate is not conducive to imparting the high color to the apples which is the characteristic feature of the same fruit produced in the orchards of Eastern Washington. However, it has been found by practical tests that apples of very satisfactory size and flavor can be produced in many favored localities of Western Washington, and a large tonnage of this fruit is annually produced, finding consumption for the most part in the local markets.

Cherries, plums, prunes and small fruits yield abundantly in practically all sections of the western part of the state and in Clarke County, in the southwestern section, prune production has been an important industry for many years.

In Pierce County the thriving towns of Puyallup and Sumner are the distributing points for an important berry industry. The valley lands surrounding these communities have been found particularly well adapted to the production of red raspberries and other small fruits. The berries come to the marketing stage firm and plump and suited for shipment to distant eastern markets. The growers in these communities are united in an organization which directs the distribution of their crop. Carload shipments of berries go out daily during the shipping season to the large eastern markets where they find ready sale at profitable prices. That part of the crop which is not suitable for distant shipments is utilized in a large cannery which also handles other fruits, including importations from the orchards of Eastern Washington.

Snohomish County is another section where small fruits are grown upon a commercial scale. Raspberries, blackberries and loganberries are extensively produced in this section, and the county is also widely recognized in Western Washington for the superior quality of its orchard fruits.

Vashon and Maury, two large islands of Puget Sound, are the centers of an important strawberry industry. The soil and climatic conditions on these islands have been found particularly well adapted to this fruit and a large area of logged-off lands is devoted to this industry. Vashon Island alone annually markets nearly \$40,000.00 worth of strawberries which helps supply the markets of the large commercial and industrial centers of Western Washington. Strawberries are also grown upon an increasing scale on the lower levels east of Seattle and bordering upon the shores of Lake Washington.

In Skamania County will be found another section in which strawberry growing has developed to large proportions and there is also in this county much land that is particularly well suited for general orchard purposes. Skamania County fruit is recognized as the equal of any produced in the Northwest.

In general, the conditions described in the foregoing will be found applicable to the remaining portions of Western Washington. In some counties the area of land available is comparatively small, owing to the fact that the original timber growth still awaits the coming of the lumber jacks.

A phase of the fruit growing industry of Western Washington more important by reason of its latent possibilities than on account of its development thus far, is the cranberry industry. In Pacific County around Willapa Bay is a district of three thousand to four thousand acres of low marshy lands which are today producing and marketing an exceptionally superior quality of cranberries. The products of these marshes sell in competition with the best cranberries of the East and the industry is one that is certain to attain important proportions in the future.

CONCLUSION.

What has been presented in the foregoing has been intended merely to give the reader some general insight into the scope and magnitude of the fruit industry of this state. Obviously, within the limits of these pages it is impossible to offer detailed facts and figures with reference to each fruit growing locality, but a sufficient showing probably has been made to afford reasonable proof of the contention that the fruit growing industry has already attained important proportions in Washington. The acreage that has been planted in orchard and which is not now in bearing is vastly larger than the area now in production. It is quite safe to assert that within the next five years the output of Washington fruit will be double or possibly treble the present production. A final word may be spoken with reference to the varieties of the different orchard fruits utilized for commercial purposes. The leading varieties of the different fruits may be enumerated as follows:

Apples—Winesap, Jonathan, Rome Beauty, Spitzenberg, Newtown Pippin, White Winter Pearmain, Yellow Transparent, Arkansas Black, Delicious, Winter Banana.

Pears—Bartlett, Anjou, Winter Nells, Comice.

Peaches—Elberta, Crawford, Carmen, Slappy.

Cherries—Bing, Royal Ann, Lambert, Black Republican, Early Richmond.

DAIRYING.

Scarcely more than ten years ago importations of butter from Oregon, California and the eastern states into the State of Washington were estimated in terms of millions of pounds annually. For the year 1905 the cities of Seattle, Tacoma, and Spokane brought in from the sources above mentioned more than five million pounds of butter. In that period of the state's history it was not uncommon for large dealers to advertise a trainload of Iowa butter. At the present time the dairymen of this state are capable not only of supplying the home demand, but are likewise reaching out for outside trade. This does not mean that no butter produced outside of Washington finds a market in the state. Considerable quantities are still imported and will continue to be. But nevertheless it is well established that Washington is capable at the present time of furnishing its people with everything they require in the line of dairy products.

When it is considered that the population of the state has increased by fully fifty per cent during the past ten years it will at once be apparent that some tremendous forces have been at work in connection with the development of the dairy industry. The three principal factors which have entered into and influenced the remarkable change which has been accomplished in so short a period may be enumerated as follows: (1) The soils of the state which have been found wonderfully well adapted to pasture purposes, and to the production of maximum yields of forage crops. (2) Climatic conditions

which lend themselves in every respect to successful dairying. (3) The extraordinary growth of the commercial and industrial centers of the state which have supplied a market ready and alert to absorb the continually increasing output of Washington dairy farms.

Dairying is no longer a haphazard industry. It is a highly organized business of its own and when conducted upon scientific principles and under the favorable conditions which are presented in this state offers a field of industry uniformly satisfactory and profitable.

Both the state and federal governments have interested themselves in furthering the interests of Washington dairymen. An unceasing campaign of education has been in progress for years, having for its purpose the building up of improved dairy herds. Practically every dairyman in the state has access to the experience and instruction of government and state experts. Constant demonstrations of improved dairying methods are carried on in every section where dairy farming is followed and to these must be added the important influence of state and county fairs, stock judging contests, and dairy cattle shows which are annual occurrences throughout the state. Another influence of prime importance in building up and improving the dairy herds of Washington is the system of inspection constantly in operation under state and municipal auspices. The dairyman who escapes the influence of these various agencies for the betterment of his calling must reside in some altogether isolated location or else be extremely indifferent to his own interests.

Principal Districts.

It is difficult to point out any particular sections of the state which are best adapted to this industry. King County, according to returns of the county assessors, has the largest number of dairy cows of any county in the state. But this is due primarily to the fact that King County contains within its borders more than twenty-five per cent of the total population of Washington. Many other districts enjoy advantages equal to those possessed by King County in connection with this industry, although these advantages are not the same in all localities. Western Washington as a whole has often been described as a natural dairy country. In this favored section except for a brief period in midsummer the pastures are green throughout the year. An intricate network of rivers and small streams, whose cooling waters trace their sources to the glaciers and snow-capped peaks of the mountains, furnish an invaluable auxiliary to successful dairying. Root crops suited to form a large part of the dairy cow's ration are produced in great abundance and ready markets are almost invariably available to absorb the products of the dairy farms.

In the warm irrigated valleys of Eastern Washington advantages of equal importance, though of a different character, are discovered. In this section immense crops of alfalfa and other grasses are produced and to these, recent years have added a large and constantly

increasing acreage of corn. This latter crop is often cut green for silage purposes or it may be allowed to mature and be harvested for winter feed. A heavy tonnage of surplus alfalfa annually finds its way from Eastern Washington to the dairying centers of the coast to help carry through the winter the dairy cattle of that section.

Dairy farms may be found in practically every county in the state which are typical of the industry generally. On such farms the inquirer will be shown a herd of pure-bred or high grade cows housed in comfortable and sanitary buildings during the winter, and provided with ample pasturage for the other portions of the year. He will find scientific equipment for testing the milk of each member of the herd and will be advised of methods in force for eliminating the nonproducers or unprofitable cows. Machinery driven usually by electric or gasoline power for cooling and separating the milk will be exhibited to him and he will be impressed by the precaution exercised by the proprietor to insure that his product reaches the market under the most approved sanitary conditions. On the larger dairy farms milking machines will be found in operation and the buildings will be found electrically lighted and supplied with other accessories in common use by the modern farmer. The silo has become an almost indispensable feature of the dairy industry and the number of these to be found on the average Washington dairy farm is governed by the extent of the individual dairyman's operations. In charge of a dairy farm such as above described, in almost every instance, there will be found a man who is not only a good farmer, but a business man as well. His family will be found comfortably housed and well provided with the conveniences which contribute to make the pleasant surroundings of a modern American home.

It is not to be understood, to be sure, that every dairy farmer in the State of Washington conducts his business under such favorable conditions as are above outlined. There are those who still adhere to scrub stock and who in other ways lag behind the procession. But the general tendency among the men and women engaged in dairy farming in this state is to build up better herds and to provide themselves with the equipment which experience has shown to be necessary for a realization of maximum results from the industry in which they are engaged.

Some mention already has been made of the principal crops which the dairymen produce for the purpose of supplying feed for their herds. Other products of less importance, perhaps, but which are important contributors to successful dairying in Washington, may be named. In Western Washington such crops as white and red clover for pasture, and oats, barley, wheat, rye, peas, vetch and kale, will be found extensively grown. Alfalfa and corn are the standard dairy crops in Eastern Washington, but these are supplemented frequently by pasture lands of native grasses, barley and oats and heavy crops of various root products.

Markets.

The question of markets has never been a serious problem for the Washington dairyman. In districts where any considerable number of farmers are engaged in the industry one or more creameries will almost invariably be found in operation. These creameries maintain a regular service for collecting the cream from their patrons. In the vicinity of the large cities a profitable market is found in supplying the demand for fresh milk and cream and in several districts large condensing plants have been established which are in the market for an unlimited supply of milk. The Alaska trade is also a heavy consumer of Washington dairy products and the business of Washington dairymen with Uncle Sam's great northern territory is certain to grow and expand with the coming years.

LIVE STOCK.

It probably is correct to say that no industry of the State of Washington has undergone greater changes, due to the rapid development and settlement of the state, than has the live stock business. In early territorial days much of the eastern portion of Washington was an open range. In this vast region broad areas of bunch-grass and other native forage feed was offered to the livestock men and became the basis upon which many of them accumulated large herds of cattle and horses and immense bands of sheep. The range was open and free and apparently was inexhaustible in extent. The cattle men flourished and became wealthy. But with the advent of railroads and the influx of thousands of settlers bent upon securing homesteads in the open areas of the state the situation became materially modified. The open range began to disappear before the encroachments of fenced-in farms and the large herds which formerly had ranged the plains without let or hindrance materially dwindled.

This process has been in progress for many years, but it has not resulted in wiping out the livestock industry nor in fact should it be said that the business as a whole has decreased either with respect to the number of livestock in the state or with reference to actual cash returns to those engaged in the industry.

The vital difference is found in the fact that the comparatively few stock men who formerly numbered their herds by the thousands have been succeeded by thousands of farmers each owning a comparatively small number of cattle. One result has been that a far superior grade of stock is now produced in the state than was the case under the earlier conditions. The farmer who annually markets a few head of fat steers has found it to his advantage to produce a high grade animal rather than to bother with the scrub stock of the earlier days. The markets of the state are largely supplied with beef cattle from these small farmers, and the number of marketable animals secured from this source increases annually.

In some sections of the state feeding on a large scale is still practiced and will be for many years to come. There are numerous ranges of hills in Eastern Washington which have not been placed under cultivation and are not likely to be for several decades. Such locations often furnish excellent range and full advantage is taken of every such opportunity. In the irrigated districts of the state where large crops of alfalfa are annually grown, thousands of steers are brought in from other states each fall to secure the benefits of the late pasture. The climate of these sections is admirably adapted to the wintering of stock. After the alfalfa pasture is exhausted the animals are fed through the winter on alfalfa hay and are topped off for market with a liberal feeding of corn and some other grains.

Forest Reserve Pastures.

In addition to the foregoing, opportunities for pasturing stock are offered on the ranges which are located within the government forest reserves. These reserves cover practically all of the mountainous area of the state extending often well down to the foothills. Much of the lower areas within the reserves furnish excellent pasture and there is lively competition among the stockmen for the more favorable locations.

Horses.

In spite of the fact that automobiles and motor trucks are being utilized on a constantly increasing scale, there seems to be no let up in the demand for good horses. According to the statistics of the United States Department of Agriculture, there were more than 300,000 horses in the State of Washington at the beginning of the present year, an increase of more than 100,000 during the past decade. What has been said in the foregoing with reference to conditions under which livestock is now produced in the state applies particularly with reference to horses. There are few, if any, horses roaming the ranges of Washington at the present time. Scattered bands will be found upon the Indian reservations and occasionally on the unfenced upland ranges but as a whole the industry is now carried on as a part of general farming operations. The breeding and sale of pure-bred horses is an industry that has assumed important proportions in this state in recent years. The favorite breeds are Percherons, Shires, Belgian, and French draft horses. For all of such animals produced in the state there is a ready market with no seeming disturbance of valuations in spite of the encroachments of the automobile.

During the past two years a steady and unfilled demand for horses of certain grades and weights has been offered to the stock raisers of this state by the various warring powers of Europe. Thousands of heads of horses have been sold at good prices to meet the requirements for cavalry and artillery animals and it is the testimony of the

buyers for the different governments concerned that some of the best stock secured by them in this country has come from the ranches of the State of Washington.

Heavy draft horses and horses suited for general farming purposes seem to be most in demand. Such animals are bred in large numbers and are finding their way to the cities for use in handling heavy trucking business and to the countless farms of Washington as first aid to the farmer in producing and marketing his crops. In almost any rural section of this state a visit to the marketing center on a Saturday or special market day will convince the inquirer of the fact that the farmers of Washington appreciate good horse flesh. Even in the smaller trading centers hundreds of teams may be seen on such occasions and the great majority of them will be found on inspection to be animals of good blood and well adapted to the purposes for which they are used.

Sheep.

According to the estimates of the United States Department of Agriculture, there were 598,000 head of sheep in the State of Washington at the beginning of the present year. The high prices paid for wool as also for mutton during the past few years have made sheep growing an unusually profitable industry. These animals are a common sight in practically all of the farming districts of the state. They will be found on the valley and lower hill lands of Western Washington, on the islands of Puget Sound, and are bred and marketed by tens of thousands in Eastern Washington. Conditions in the Columbia River basin and in the irrigated districts adjacent thereto have been found ideal for sheep. In the Yakima Valley where the industry is conducted upon an extensive scale lambing operations frequently yield better than one hundred per cent. With the advent of early spring the lambs are ready to travel and by easy stages the flocks are driven from the winter feeding grounds in the lower portions of the valleys towards the foothills of the mountains, finding forage for themselves on the way. Once in the hills excellent pasture is provided for them and the flocks follow the receding snows until the approach of fall warns the herders to head once more for winter quarters. The sheep begin to arrive back in the valleys after the final cutting of alfalfa and for several weeks of the late fall and early winter they will be found in immense numbers pasturing on the alfalfa stubble. Thereafter they are fed usually in open enclosures until ready for market. Such operations as are above described are carried on usually by men who engage in sheep growing as an exclusive occupation. The market for mutton and wool is further supplied from smaller bands bred and cared for by individual farmers upon their own premises. On the Yakima Indian reservation there are a number of Indians who engage in the sheep industry on a considerable scale and have made themselves financially independent as the result of their operations.

In the aggregate, Washington produces a great surplus of sheep and trainload shipments from this state to the eastern markets are of common occurrence.

Hogs.

The breeding and fattening of hogs for market is an industry that has undergone great development in recent years. This development has been due in large measure to the increased attention that has been paid to corn as a commercial farm crop. This important cereal, universally regarded as an indispensable adjunct to the production of first class pork, is rapidly forging to an important place in the list of grains produced in this state.

Once having demonstrated the fact that he could grow corn in quality and yield to compare favorably with the banner showings of the middle states, the attention of the Washington farmer has by the same fact been directed to the profits to be obtained from furnishing the market with fat hogs. As the corn growing area is confined largely to the irrigated districts of the state, so it will be found upon investigation that the bulk of the hogs are likewise grown in those districts. As is the case with other animals, the climatic conditions in the valleys where irrigation is practiced are favorable to the growing of hogs. Alfalfa or clover pasture will bring the animals through to the fattening period in prime condition. With corn and other grain then available for converting them into a marketable product, the farmer is able to send his hogs to the stockyards in prime condition to compete with eastern corn-fed pork.

Hogs are raised also in Western Washington upon a smaller scale. In this part of the state they are pastured and fed on various root crops and usually topped off for market with some grain. This industry is growing so rapidly that the time is at hand when Washington will be an exporter rather than an importer of high grade hogs and hog products.

Other Live Stock.

Although practiced upon a comparatively small scale, the breeding of mules has been found a profitable undertaking in several sections of the state. These animals are preferred to horses for some purposes and are always in good demand.

As a side line to the live stock industry the breeding and raising of goats has a place of fixed though minor importance. The principal breed is the angora goat, which has been found an excellent aid to settlers upon logged-off lands in clearing their holdings of the rank undergrowth which is characteristic of the western section of the state. Small bands of these sure-footed animals will be found browsing on the hillsides, clambering over logs and securing their own subsistence from the natural forage offered. From the sale of the wool the farmers realize a sufficient return for the expense involved.

CONCLUSION.

As has already been suggested, the chief purpose of this introductory chapter has been to bring the reader into contact with the field in which the Department of Agriculture operates. A great deal of detail that might have been included has necessarily been omitted by reason of space limitations, and statistical tabulations for the most part have been purposely avoided. Much of this latter data will be found presented in the following pages in connection with the reports of the activities of the various divisions of the Department.

What has been offered in the foregoing will suggest at least some idea of the varied resources of this state, particularly as applied to the industries around which the duties of the Department are centered. It is a field of limitless possibilities from the standpoint of the men who are engaged in its actual development. From the standpoint of the officers and agents of this Department it offers a field of equally boundless opportunity for useful public service.

It is a source of satisfaction to acknowledge here the energy and zeal which the division heads and their assistants have brought to the discharge of their duties. The Department is making progress with the state. It is in a sense finding its way, just as the men who are engaged in the development of the state's resources are finding their way. The work of perfecting the organization of the Department in itself has been a constant and difficult problem. It has been necessary to establish precedents, to apply the statutes to the practical situations encountered, many of which were not contemplated by the lawmakers, and the work has been handicapped in some degree by lack of adequate appropriations. Nevertheless, substantial progress has been made. The laws are being enforced, and the powerful arm of the commonwealth is being directed with increased certainty and effect in the upbuilding and encouragement of agriculture and its allied industries.

In conclusion, it may truthfully be said that the centralized plan of administration made effective under the law of 1913 has fully justified itself under everyday working conditions. Some modifications and further strengthening of the law will be required from time to time, but it is apparent already that the present plan far excels the former system in economy, efficiency and in actual service rendered to the state.

DAIRY AND LIVESTOCK DIVISION

The activities of this division during the past biennium have been greatly increased over those of the previous period. This is due in a large measure to a general stimulus in dairy farming throughout the state, and to added duties resulting from legislative enactments.

The work of the division consists of dairy and creamery inspection, the control and eradication of communicable diseases of livestock, and the enrollment or registration of stallions.

DAIRY INSPECTION.

The primary object of the milk inspection service is to advance the public welfare through the protection of the public health. To accomplish this object and to insure the public against the wilful adulteration of milk by skimming, watering and the addition of preservatives, the State of Washington has enacted certain laws regulating the production and sale of dairy products.

Cows' milk has always been a staple article of food with all classes and is one of the best and cheapest foods on the market. It is one of the principal diets of invalids and is being used more and more for the feeding of infants, and in fact is often the exclusive food of children during the first years of life. It is principally consumed in the raw state, and being a very suitable medium for almost every description of germ life, which may gain access to it in its journey from the cow to the consumer, or even in the udder of the cow herself, can become a very dangerous food, should it perchance contain any deleterious organisms.

Milk, which includes cream, butter and cheese, usually passes through a number of hands in its procurement, collection, processing and distribution, therefore the problem of milk hygiene is very complex and must embody all phases of milk control, from the time it is produced until it reaches the consumer, and since its composition and wholesomeness are entirely dependent upon its proper production and handling, the necessity for a strict supervision is obvious. Milk inspection is made to cover the health and feeding of the cattle, the cleanliness of the producing plants, the methods of handling and caring for the milk, and the condition of health of the people who come in contact with it.

ANIMAL DISEASES AFFECTING MILK.

There are certain pathological conditions in the cow itself which may contaminate and render milk unwholesome. Some of the principal cattle diseases influencing the quality of the milk are Tubercu-

lois, Actinomycosis, Anthrax, Cowpox, Rabies, Septicemia, and Foot-and-Mouth disease. Mastitis or Garget in the cow's udder and other septic conditions as puerperal sepsis, septic metritis and suppurating wounds all constitute a grave danger to the milk supply and therefore must be carefully supervised and controlled. Every owner of a dairy herd should consider it his duty to himself and to the community to keep only healthy cows, supply them with wholesome food, and keep them in clean, comfortable quarters. He will also find it the most profitable.

DISEASES AND EPIDEMICS DUE TO MILK.

Mr. Ernest Kelly of the United States Department of Agriculture says:

"A full realization of the dangers from an infected milk supply can be obtained by a perusal of Bulletin 56 of the Hygienic Laboratory, published in 1909. At that time Trask noted 240 milk-borne epidemics reported up to 1895 by three investigators in England and the United States. Trask himself noted 260 additional epidemics, making 500 in all. The first reported milk-borne epidemic occurred in 1857.

"Chief among these epidemics have been those of typhoid, scarlet fever, and diphtheria, and within the past few years outbreaks of septic sore throat, such as those in Boston, Baltimore and Chicago. Tuberculosis among handlers of dairy products is also a menace, though its effects do not show in startling outbreaks such as those which accompany some of the other diseases. Hardly a month goes by without some report of a milk-borne epidemic. It is true that many newspaper reports of epidemics are not founded on data of sufficient scientific accuracy to attach these epidemics absolutely to the milk supply as the causative agency; but still enough reliable instances have been recorded to make this question one of vital importance to the average community.

SOURCES OF INFECTION.

Milk may be infected in the following ways:

1. By diseased persons who are suffering from a mild form of malady, and who themselves come into intimate contact with the milk somewhere between the cow and the consumer.
2. Carriers who, while they may be free from disease, harbor the organisms, which may be carried in the milk.
3. Transmission of pathogenic bacteria by persons who have been caring for the sick and who afterwards handle the milk.
4. Contaminated water supplies, in which the milk utensils are washed.
5. Fly contamination, either in the country or in the city.
6. The use of unsterilized milk bottles, collected from houses where disease exists."

DEFINITION OF CLEAN MILK.

"While a rigid application of the word 'clean' would exclude milk which contains foreign matter or any bacteria whatever, for ordinary purposes we may understand clean milk to be milk from healthy cows that is free from dirt and contains only a small number of bacteria, none of which are of a disease-producing nature.

By exercising proper care the number of bacteria which get into the milk during the process of milking is small, but these will increase rapidly if the milk is not kept cool until used.

If fresh milk contains a large number of bacteria, it indicates that the milk has become contaminated during the process of milking, although in some cases many of the bacteria may come from an infected udder.

If milk contains a large number of bacteria when it reaches the consumer either it is not fresh, has come from a diseased cow or has otherwise been contaminated, or it has not kept cool. Although such milk may contain no visible dirt, it is not bacteriologically clean and should not be sold as clean milk.

If milk contains large numbers of blood corpuscles or pus cells, it is an indication that the cow from which it was drawn is diseased.

Milk from a diseased cow, from one about to calve, or from one that has very recently calved possesses abnormal qualities, and though it may not always be dangerous to use, it can not be considered as clean milk and should not be used as such.

BACTERIA IN MILK.

Bacteria are single-celled plants so small that they can not be seen with the naked eye and belong to the fungi order of plant life. To most people the word "bacteria" immediately suggests disease, and while there are a number of dangerous or disease producing bacteria it is known that most varieties are classified as harmless; however, many of these so-called harmless varieties, especially when present in large numbers, have a deleterious effect upon milk by causing chemical changes in its composition and by influencing the color and odor.

Bacteria are omnipresent, being found everywhere in nature. Every particle of dirt, whether it seems to the eye a source of contamination or not, carries with it great numbers of bacteria.

All milk, unless collected under very exceptional circumstances, contains some bacteria. Milk furnishes all the food material and other necessary conditions for bacterial growth. The bacteria commonly found in milk grow most rapidly at temperatures between seventy degrees and one hundred degrees F. At a temperature below fifty degrees F. the growth is much retarded but continues slowly, as will be noted from the following table:

RAPIDITY WITH WHICH BACTERIA MULTIPLY IN MILK.

Relative growth of bacteria when held at different temperatures.

Temperature of Milk	Number per Cubic Centimeter at Beginning	Number at End of 6 Hours	Number at End of 12 Hours	Number at End of 24 Hours	Number at End of 48 Hours
50° F.	10	12	15	41	62
68° F.	10	17	242	61,280	3,574,240

The number of bacteria in milk depends first on the number of bacteria in the udder; second, on the amount of contamination from outside sources; and, third, on the rapidity of bacterial growth. The rate of growth depends on the temperature at which the milk is held and its age. It indicates the cleanliness and care observed in producing and handling milk.

Where milk contains large numbers of bacteria it is reasonable to suppose that under such conditions the danger of infection by disease germs will, as a rule, be greatly increased. For if a farmer or a dairyman is so careless and ignorant as to let his milk become so contaminated, he is not likely to be very particular about the health of his cows or of those who attend them.

Bacteria find their way into the milk from every source. Some may come from the udder itself, where they grow in the milk cisterns and ducts, but as these are always discharged in the first milk drawn from the animal, can be avoided by allowing the first few "draws" to go to waste upon the ground.

The greatest number of bacteria comes from the dust of the air, the dirt from the udder and flanks, from the milker and from unclean utensils.

IMPORTANCE OF CLEAN MILK TO THE CONSUMER.

The consumer is interested in clean milk primarily because no one cares to use a food which is not produced and handled under sanitary conditions. There is a more direct interest, however, because of the danger of contracting disease which may be communicated by this means. Serious epidemics of typhoid fever, septic sore throat, and other diseases have been disseminated through the milk supply. The weight of scientific evidence at the present time leads to the conclusion that tuberculosis may be transmitted from animals to human beings, particularly children, who consume raw milk containing tubercle bacilli.

Cleanliness is not an absolute safeguard against disease, but it is the greatest factor in preventing contamination. From the health standpoint there is great danger not only from the specific disease producing bacteria previously mentioned, but from milk that contains large numbers of miscellaneous bacteria which may cause serious

digestive troubles, especially in infants and invalids whose diet consists chiefly of milk. There is also the minor consideration of the loss to the consumer from milk souring or otherwise spoiling before it can be used. The cleaner the milk, the longer it will keep good and sweet.

IMPORTANCE OF CLEAN MILK TO THE PRODUCER.

Clean milk not only benefits the consumer, but the milk producer who will consider this subject from an unbiased standpoint will find many ways in which he himself is benefited by producing clean milk. There are a number of items in this connection which, when considered alone, may seem unimportant, yet collectively they are of great importance. Moreover, they are not only of immediate value, but have a cumulative value reaching far into the future. Tuberculin testing, for example, is not only a safeguard to the purity of the milk supply for the consumer, but is a means of assisting the producer to protect his herd against future ravages of tuberculosis.

Most producers of market milk have experienced the chagrin of having a shipment of milk refused or returned because it reached the market sour, tainted, or otherwise in poor condition. Although such milk may be used for feeding pigs, it usually means a complete loss to the producer, as it costs too much to transport it back to the farm and because, depending on the market as an outlet for his milk, he has no means for utilizing small amounts at uncertain intervals. Another important consideration is the unpleasant effect upon the purchaser. Delivering sour or tainted milk usually results in losing the confidence of the dealer; or, if it is delivered direct to the consumer, it means the loss of good customers. A reputation for clean milk means fewer complaints, a better class of patrons, and a steady market for the product of the dairy.

Safeguarding the purity of the milk is a protection to health on the farm in several ways; first, the health of the farmer's family, who use a portion of the milk themselves; second, the health of the calves, which live largely on milk. Healthy cows to breed from and pure milk to feed upon are two important factors in rearing thrifty calves and in the development and maintenance of a healthy and profitable herd. Aside from these immediate and definite benefits there is another consideration, not immediately measurable but of vast influence, namely, the moral influence, for no one can learn to produce good and clean milk without learning good methods of care and management of the herd, and the study of these things leads to greater care and intelligence in the economic features of the business.

THE COST OF MILK.

There has been too much indifference on the part of consumers with respect to the cleanliness of milk; too many of them desire to buy milk at a low price and do not give any consideration to quality.

Dirty milk may prove expensive as a gift, while clean milk may be economical even at a high price; the cheapest article is often the most expensive. A higher price for clean milk may be a cheap insurance against some form of sickness. It is gratifying to note, however, an increasing demand for good, clean milk. This demand has resulted in more stringent regulations concerning the sanitary conditions associated with the milk supply. Compliance with these sanitary rules requires additional care, attention, and extra expense on the part of

IMPORTED LADY.

Guernsey cow. Record 9,627 pounds milk and 536 pounds butter in one year. Has been grand champion cow at Spokane, Wash., and Salem, Oregon, fairs. Owned by A. J. Gile, Chinook, Wash.

the producer of the milk, and while this expense may not be large, it is only fair that the consumer should pay his share of the cost of improving the quality of the milk. The consumer can not expect to purchase a clean, safe milk at the same price as a dirty milk which endangers the health of his family.

A more serious consideration is the market increase in the cost of production which has resulted in recent years from feed and labor problems. This increase is in keeping with the increase in the cost of almost every commodity, and the consumer must expect to pay his portion of any legitimate increase in the cost of production occasioned by these conditions.

On the other hand, there is need of more attention to better management on the average farm devoted to the production of milk. The amount of milk produced per cow is frequently so low as to reflect

seriously upon the business ability of the owner. A producer who makes no systematic effort to lower the cost of production by increasing the average production of milk per cow is entitled to little sympathy if he finds the business unprofitable. The profits yielded by a good cow often go to offset losses caused by poor cows in the same stable. The keeping of records of production of each individual in the herd, the elimination of unprofitable cows, the improvement of the herd through selection of the best producers and breeding them to a bull of dairy merit, and the selection of the best heifers from such breeding are necessary to put milk production on a sound basis. Unless the producer does these things he disregards the fundamental principles of business economy, and it is unreasonable for such a man to expect the consumer to pay him a profit on business practices which represent such economic waste. There is no good excuse for slack business methods on the dairy farm. Directions for keeping records of milk yields and cost of production are furnished by the Washington State College and by the Department of Agriculture."*

DAIRY INSPECTION.

It will be evident from the foregoing remarks that the duties of a dairy inspector cover a very broad field, and are very exacting and important. In order to be able to offer expert advice a thorough knowledge of milk, its formation, procurement and characteristics are necessary; likewise, a knowledge of conditions which have an influence upon milk while still in the animal body and the factors which change this food after it is taken from the cow, therefore our field inspection force consists of men especially qualified for the work at hand both by technical and practical training.

While the work as outlined in the statutes is of a regulatory nature and carries full police power, we have found through experience that more efficient inspection is possible through intelligent co-operation with the farmers themselves. So our work has been largely educational both with the producer and distributor. We find much of the poor milk is due to ignorance and not to any wilful intent.

During the period covered by this report there have been three dairy inspectors and one creamery inspector employed by the department, and while we have endeavored to carry our work into each of the thirty-nine counties of the state, we have found this to be physically impossible with this number of field men.

As a matter of economy and efficiency based upon experience it has appeared best to divide the state into five dairy districts. Each of these districts include several counties and are based upon the approximate number of dairy farms, population and transportation facilities.

*Farmers Bulletin No. 602—U. S. Department of Agriculture.

Early in the biennium it was decided to have the inspectors visit each dairy farm of a county in their district before taking up the work in another county, and while this has been fairly successful, we have, on account of emergency complaints and other calls for assistance, been obliged to deviate from this fixed program.

The inspector in his work uses the score card system of rating dairy farms, which has been found to be one of the best methods of assistance both to the farmer and the inspector.

Each dairy is given a number on the score card and these cards are mailed to the Olympia office every week. The inspector has a map of each county and as fast as these dairy farms are visited he locates the farm on the map by recording the duplicate number appearing on the score card. These maps when completed contain the exact location of each dairy farm in a county, and are filed with the Department at Olympia.

During the period we have compiled complete maps of Whatcom, Snohomish, Thurston, Grays Harbor, Lewis, Pacific, Wahkiakum, Clarke and Cowlitz counties and find these very valuable as references. Maps are now being completed as fast as is consistent with good service of the other counties of the state. The reports indicate that our inspectors visited nearly 1200 dairies in Whatcom, seven hundred in Snohomish, and nine hundred in Lewis counties. It is hoped with additional assistance to have all the census maps compiled during the next two-year period.

In addition to the inspections of milk supplies for insanitary conditions, these inspectors, by reason of their training, are continually being called upon for information and advice relating to the various phases of dairy farming, such as correct and balanced rations, testing, breeding questions and proper markets. We have also co-operated with the State College in the organization of co-operative cow testing and other societies, and I would indeed feel that we have been remiss in our duty if the importance of this work, which means so much to the welfare of the dairy industry of Washington, was not mentioned and recognized in this report; therefore we are incorporating herewith a short article by O. E. Gibson, Dairy Field Agent of Extension Division, Washington State College, covering the organization of these associations, their results and value.

RECOMMENDATIONS.

Dairy farming is followed in greater or less degree on at least seventy-five per cent of the farms of the state. It is, however, more extensively developed as an industry in Western than in Eastern Washington, as is indicated in the accompanying tables, but in those counties east of the Cascade range it is becoming more and more prominent in their scheme of diversified farming.

The total value of dairy products sold as market milk and cream, condensed milk, butter and cheese, are shown herewith, and while

these figures represent several million dollars they do not take into consideration the value of milk sold from one and two cow dairies or the value of the butter manufactured upon the farm and classified as dairy butter. The value resulting from an increased fertility of soil on account of dairy cows would, in my judgment, if it could be figured in dollars and cents, amount to fully as much as the returns received from these direct sales.

The opportunities and natural advantages for dairy farming in Washington are not exceeded by any other state of the Union, and it is to develop these possibilities and establish a profitable system of agriculture that our aims are directed.

Considering the importance of the development of the industry to the state, the total number of dairy farms, the character and value of the inspection service to the public health and the territory to be covered, it is respectfully recommended and urged that appropriation be made to cover five dairy inspectors and one creamery inspector. An increase of two men for whom there is urgent demand, based upon the growth and requirements of the industry at the present time, which are far greater than during the period when the employment of four inspectors was first authorized.

COW TESTING ASSOCIATIONS.

By O. E. Gibson, Dairy Field Agent, Extension Service, State College of Washington.

"It gives me great pleasure to submit for your approval the following brief summary of this branch of Dairy Extension work in which your department has so admirably assisted that of the Washington State College.

Statistics have proved that two-thirds of the cows in the United States are unprofitable. Experience has demonstrated the impossibility of distinguishing between profitable and unprofitable cows except by the continued use of the scales and Babcock test.

In order that records may be kept most economically and conveniently the Extension Department of the State College of Washington has been giving assistance wherever the demand has arisen, in the organizing of farmers' Co-operative Cow-Testing Associations.

Herd record books are furnished each member and a record is kept by the man employed to do the testing, of the product of each cow in the herd, together with the cost of production. The tester visits each member's farm one day in each month, records each cow's production in terms of milk and butter-fat, charges her up with the amounts of feed she has been receiving and makes a record of the profit or loss each cow returns.

It is both practical and desirable that dairymen weigh each cow's milk, night and morning continuously, but on the vast majority of farms this practice is deemed a burden. The association records taken for one day in each thirty do not give quite the accuracy in results

which could be obtained by weighing the milk each day, however, in comparing yearly milk and butter-fat records made upon the same cows at the same time, are found to correspond very favorably.

Operating in this manner it is possible for one association to accommodate between twenty and thirty farmers having a total of from five to six hundred cows. The cost of keeping these records is \$1.50 per cow per year. This money paid in to the association covers the cost of operating.

During the past year assistance has been given in organizing thirteen cow-testing associations located as follows:

<i>Location</i>	<i>No. Members</i>	<i>No. Cows Being Tested</i>
Pullman, Wn.	12	300 and under 350
Walla Walla, Wn.	25	500 and under 550
Enumclaw, Wn.	34	550 and under 600
Montesano, Wn.	20	600 and under 650
Duvall, Wn.	22	600 and under 650
Chehalis, Wn.	30	500 and under 550
Mount Vernon, Wn.	23	600 and under 650
Puyallup, Wn.	25	500 and under 550
Snohomish, Wn.	26	550 and under 600
Olympia, Wn.	38	550 and under 600
Sunnyside, Wn.	24	500 and under 550
Chimacum, Wn.	24	550 and under 600
Sequim, Wn.	26	500 and under 550

The results being obtained through cow-testing associations are proving highly satisfactory not only to dairymen themselves but to all who are interested in the advancement of the dairy industry.

Farm work, consisting as it does in large part of manual labor, is apt to become burdensome unless intelligent understanding is the guiding principle and a definite object is in view.

The monthly visit of the tester stimulates this interest and his work places the dairy herd on a business basis. Once real live interest is aroused many channels for betterment are opened, such as improved breeding, better dairy methods, increased dairy production, and finally the cow-testing movement, being an organized effort for improvement, is conducive to better community spirit.

Very respectfully,

(Signed) O. E. GIBSON,

Dairy Field Agent."

MARKET MILK AND CREAM.

By Marcus Dey, Dairy Inspector.

A review to date of the status of the dairy industry of the state from the standpoint of the public health, is exceedingly encouraging and one of which we may well be proud. While the advancement of the cause of pure dairy products has not been proportionately as rapid as it was ten years ago, when there was room for a great deal of improvement, it has been healthily steady.

The primal endeavor of this division has been to aid all those who are connected in any way with the production or handling of dairy products, in putting these products out in a safe, clean and uniform

condition, and instruction has been made to take the place of police powers wherever possible, realizing that co-operation goes further than antagonism in getting desired results.

One phase of the problem which has seemed to warrant a great deal of attention, is the education of the consuming public to a proper appreciation of the value of high grade dairy products in order that those producing and handling these products may realize sufficient financial returns to permit of a continuation and an extension of their efforts in placing clean milk and cream on the market. The average consumer has very little knowledge of the cost of producing milk, and forgets that the price paid today for a quart of milk is but little more than the price of a quart of milk ten years ago, in spite of the fact that dairy feeds are very much higher in price and that modern sanitary methods and equipment add considerably to the cost of production. It is but reasonable to suppose that the consumer should be willing to pay more for the improved product of today, not only because of the increased cost of production, but for the value of milk and milk products, based upon the food value which they contain when compared with the relative cost of nutriment in other foods.

However, it is without the sphere of this division to interest itself in the price of milk and its products, but the division does feel that it would not be fulfilling its entire duty if it neglected to encourage the use of good dairy produce from an economic as well as from a health standpoint.

As intimated above, the division has carried on extensive field inspection of dairies, retailing or wholesaling milk or cream in the cities or towns over the state. A great deal of this inspection has been carried on in conjunction with the health departments of the larger cities. For the smaller towns milk ordinances have been submitted for adoption, in order to permit local authorities to improve their milk supplies.

Publicity has been given to milk and cream sanitation by newspaper articles, and addresses in public gatherings. A number of creameries have sent out circular letters to their patrons edited by the division, bearing on methods for the improvement of the cream supplies.

MILK AND CREAM CONTESTS.

One feature of the work of this division which has been fostered is that of the milk and cream scorings carried on in cities and creameries wherever the same have been adaptable. Within the past year assistance has been given to the health departments of Seattle, Tacoma and Everett in improving their milk supplies by means of the scorings mentioned above. In Seattle these scorings have been in the form of a contest since September, 1913, and the plan has resulted in the very material betterment of that city's milk.

In Tacoma and Everett these scorings have taken place periodically over the past year and have brought considerable improvement. In

Everett the division has been able to assist the local health department in the establishment of a milk laboratory, which is now in active work looking to a continued improvement of its supply.

Assisted by this division the health department of Seattle wrought a wonderful improvement in the sweet cream output of one of the cream stations supplying that city during the past year, by means of a cream scoring contest among the patrons of the creamery. Samples of each patron's cream were taken periodically and tested and scored for bacterial content, flavor and odor, dirt, per cent of butter-fat, acidity and temperature, which is quite similar to the basis upon

BONNIE ORMSBY LASS.

First prize and grand champion cow at the Panama Pacific International Exposition, San Francisco, California, 1915. Owned by Wm. Bishop, Chimacum, Wash.

which bottled milk in cities has been scored. After three examinations of the cream had been made prizes were given to the winners by the directors of the Creamery Association. The two outstanding results of this work are:

First, the reduction in average bacterial content of all the cream from 2,813,407 per cubic centimeter, and, second, an increase in average score for flavor and odor from 16.11 to 21.43, a perfect score being 25 points.

It will be readily seen that such improvement is most desirable, because it means both a safer cream as well as one which is in greatest demand on the market.

This work was extended to another creamery which was making butter only and had not attempted to sell sweet cream, and has

resulted in the adoption of a grading system for the cream supply and increased profit for those patrons shipping sweet cream.

These scoring contests have been of great value in many ways, the chief of which are:

First: The permanent improvement of the product by an appeal to the pride of the producer.

Second: The making possible of greater financial return for both wholesaler and retailer.

Third: Have brought about the output of a more uniform product, and,

Fourth: Accomplished more in less time than would field inspection alone.

(Signed) MARCUS DEY,
State Dairy Inspector.

CREAMERY INSPECTION.

There are one hundred and thirty-one creameries and eighteen cheese factories in the State of Washington, which have contributed in no small degree to the development of agricultural prosperity of the state.

The output of the creameries and cheese factories for the two-year period amounts to over 12 million dollars.

These creameries and cheese factories have principally been under the supervision of Mr. A. D. Fish, creamery inspector, but are also visited from time to time by the other inspectors in the course of their regular inspection trips.

The creamery inspectors' work, while of a regulatory nature, is largely educational and is intended to promote better methods in manufacturing and handling dairy products.

Its objects are two-fold: (1) To protect the public against the dangers resulting from wilful adulteration and insanitary conditions, and (2) to establish for Washington creamery butter and cheese a high standard of quality and purity.

Patrons of creameries are personally instructed in the care of cream and its various grades, the methods of testing in creameries are observed and instruction offered to the butter makers in the most improved and efficient methods.

Realizing that the development of the dairy industry in Washington is dependent upon satisfactory markets and that these markets depend upon the quality or standard of the products offered for sale, we have attempted, and with considerable success, to establish throughout the state a system of purchasing cream, for the manufacture of butter, on a quality basis.

Much of the poor butter manufactured in the state is due to the poor quality of cream delivered on the market, and while our dairy and creamery inspectors through personally conducted instructions, bulletins and other educational methods, have done effective work, we

are unable to eliminate this poor butter without the co-operation of the creamery operators themselves. If the creamery men would pay for cream according to its true value there would be a rapid improvement in quality. Where the grading system is adopted it has proved of mutual advantage to the creameries and their patrons.

The following editorial published in the "Butter, Cheese and Egg Journal," Milwaukee, Wis., under date of June 14, 1916, is self-explanatory:

PACIFIC COAST STATES TO TRY GRADING.

"The Pacific Coast States, as dairy communities, are making every effort to profit by the experience of other dairy centers that have been longer in the business. A great step forward is being taken by the State of Washington, not alone in the agitation of buying cream by grade, but in actually putting the scheme into practice in many creameries throughout the State. And the creamery operators are enjoying the generous support of the State Agricultural Department, and the local press.

Too many patrons are misled by the impression that the quality of butter produced rests with the butter-maker, expecting him in many cases to make an A-No. 1 grade of butter from stale cream. And it is no easy matter to impress the patron with the fact that the grade or quality of cream rests largely in the care and proper handling which the cream receives while in his hands.

The system of grading as used by the Washington creameries, is something like the following:

First grade cream in the State of Washington is classed as cream that is clean, smooth, free from undesirable odors, sweet to the taste, or only slightly sour, and this receives the highest price for butter fat.

Second grade cream is cream that is too old or sour to grade as firsts, that contains undesirable flavors or odors in a moderate degree, and this grade is usually paid for at about 2 cents below grade number one.

Third grade cream is cream containing odors or flavors of onions, potatoes or other vegetables, also oil or kerosene, or is moldy or rancid. Such cream, of course, is by no means welcome, but to keep peace among the patrons, it is accepted where it is not worthless, and it is paid for at never more than five cents below first grade.

Quotations on cream are usually sent out as based on the first grade only, and the above will possibly be of value to any creamery deciding on instituting an arrangement for buying cream by grade, which is the only fair way of paying the producer, and the profitable way for the creamery. However, first grade cream should be sweet, otherwise the classification if followed strictly will result in a better product, if some of the concerns will not accept second grade cream and pay the highest price for it, and depend upon the renovating methods to improve the cream so the butter will be passable."

The farmer holds the key to the quality of the butter manufactured and the price received for the same. Good butter which brings top market prices can be made only from good cream and the quality of the cream in turn is controlled by the care it receives on the farm.

Every year at the State Fair in North Yakima we hold a scoring contest for market milk and cream, also for butter and cheese. Entries in these contests are made from all over the state and are of immense value as an educational measure. The scorings are made by experts in the service of the United States Department of Agriculture, who explain in detail their reasons for the scores. These contests establish a standard and are the means of demonstrating to the producer or manufacturer their weak points.

REPORT OF DAIRY INSPECTORS.

JULY 1ST, 1914, TO JUNE 30TH, 1916.

- Marcus Dey, September 1, 1915, to June 30, 1916.
- G. G. Carman, August 1, 1914, to June 30, 1916.
- C. S. MacBride, May 1, 1915, to June 30, 1916.
- I. J. Minnick, July 1, 1914, to April 1, 1915.
- J. E. Harter, July 1, 1914, to March 1, 1915.
- J. H. Martin, April 1, 1915, to May 1, 1915.
- A. D. Fish, July 1, 1914, to June 30, 1916.

INSPECTIONS	Marcus Dey	G. G. Carman	C. S. MacBride	I. J. Minnick	J. E. Harter	J. H. Martin	A. D. Fish	Totals
Dairy inspections	522	2,669	1,924	509	1,043	34	594	7,615
Creamery inspections	18	61	4	6	29	6	167	290
Store and depot inspections.....	23	189	4	5	39	12	1,020	1,292
Cheese factory inspections.....	1	21	.....	.....	.....	.....	1	23
Condensed milk factory inspec- tions	2	3	2	.....	.....	.....	6	13
Samples of milk for butter fat..	18	283	29	19	20	.....	866	1,234
Samples of cream for butter fat.	1	514	.....	1	.....	.....	838	1,354
Samples of butter.....	8	11	2	.....	8	.....	90	114
Samples for bacteriological or chemical examinations	364	14	4	.....	.....	.....	109	491
Milk cans inspected.....	1,751	3,558	1,834	273	923	97	8,094	16,585
Milk cans condemned.....	7	103	42	1	43	.....	233	479
Wagon inspections	36	324	76	36	42	4	189	707
Milk train inspections.....	.....	5	.....	.....	.....	1	2	8
Complaints answered	9	32	2	5	31	.....	94	223
Orders issued	266	203	717	236	49	2	254	1,732
Reinspections	49	233	47	1	140	11	301	737
Dairies, creameries, stores, de- pots and factories closed.....	813	44	135	6	2	.....	50	1,050
Cows inspected	6,523	58	.....	.....	.....	719	2	7,302
Arrests	1	10	.....	6	11	.....	7	35
Convictions	1	8	.....	5	11	.....	3	28
Fines	\$20.00	\$75.00	.....	\$5.00	\$95.00	.....	\$70.00	\$265.00

DAIRY ANALYSES BY STATE CHEMISTS.

By Profs. Elton Fulmer and Geo. Olson, Pullman, Wash. (State College).

BUTTER		MILK		CREAM	
Legal	Illegal	Legal	Illegal	Legal	Illegal
0	0	71	3	10	0

84 total analyses.

By Dr. C. W. Johnson, Seattle, Wash. (University).

BUTTER		MILK		CREAM	
Legal	Illegal	Legal	Illegal	Legal	Illegal
44	0	306	17	54	0

2 samples cheese (legal).
425 total analyses.
42 bacterial counts of milk.
136 bacterial counts of cream.

TOTAL PRODUCTION OF MILK AND CREAM BY COUNTIES.
FOR YEAR JULY 1, 1914, TO JUNE 30, 1915.

COUNTY	Gallons of Milk	Value of Milk	Gallons of Cream	Value of Cream	Total Value of Milk and Cream
Adams	10,897	\$2,513 00	463	\$554 00	\$3,067 00
Benton	84,646	10,027 00	970	1,310 00	11,337 00
Grays Harbor	315,588	85,355 00	8,371	13,408 00	98,758 00
Chelan	87,446	30,028 00	9,027	15,537 00	45,565 00
Clallam	7,163	1,457 00	394	394 00	1,851 00
Clarke	121,276	37,868 00	4,373	6,110 00	43,968 00
Columbia	9,300	2,590 00	1,095	1,752 00	4,342 00
Cowlitz	51,970	13,666 00	810	1,196 00	14,862 00
Douglas	10,415	3,124 00	360	476 00	3,600 00
Ferry	7,842	3,063 00	306	552 00	3,635 00
Franklin	2,253	686 00	.....	.....	686 00
Garfield	4,975	1,717 00	25	30 00	1,747 00
Grant	5,840	2,219 00	71	96 00	2,315 00
Jefferson	51,301	15,908 00	22,254	44,546 00	60,449 00
King	4,727,538	1,592,656 00	319,391	433,916 00	2,026,572 00
Kittitas	82,779	25,424 00	3,809	4,773 00	30,197 00
Kitsap	182,650	56,655 00	5,803	7,131 00	63,786 00
Klickitat	28,296	7,313 00	246	394 00	7,707 00
Lewis	133,546	34,877 00	5,758	8,182 00	43,059 00
Lincoln	32,780	10,220 00	545	800 00	11,020 00
Mason	8,100	1,620 00	.....	.....	1,620 00
Okanogan	28,686	9,732 00	1,627	2,252 00	11,984 00
Pacific	96,410	25,551 00	2,583	4,105 00	29,656 00
Pend Oreille	14,700	5,010 00	368	522 00	5,532 00
Pierce	1,005,325	326,905 00	52,957	76,047 00	402,952 00
Skagit	176,310	48,011 00	4,326	6,415 00	54,426 00
Skamania	6,475	1,619 00	12	16 00	1,635 00
Snohomish	391,970	115,662 00	15,008	17,243 00	132,925 00
Spokane	1,711,879	690,388 00	153,432	253,668 00	944,076 00
Stevens	40,032	11,373 00	635	959 00	12,332 00
Thurston	109,443	30,690 00	4,078	5,161 00	35,851 00
Walla Walla	212,378	63,550 00	16,262	16,613 00	80,163 00
Whatecom	337,294	93,096 00	31,070	31,070 00	124,166 00
Whitman	122,373	31,055 00	8,503	10,647 00	41,702 00
Yakima	136,018	34,315 00	9,794	13,629 00	47,944 00
Totals.....	10,306,348	\$3,425,970 00	663,786	\$979,519 00	\$4,405,489 00
Total export into Oregon produced in Washington	319,782	\$53,423 00	3,702,433	\$3,324,481 00	\$3,377,904 00
Grand total.....	10,626,130	\$3,479,393 00	4,386,219	\$4,304,000 00	\$7,783,393 00

TOTAL PRODUCTION OF MILK AND CREAM BY COUNTIES.

JULY 1, 1915, TO JUNE 30, 1916.

COUNTY	Gallons of Milk	Value of Milk	Gallons of Cream	Value of Cream	Total Value of Milk and Cream
Adams	16,233	\$4,789 00	512	\$713 00	\$5,502 00
Benton	34,765	8,354 00	1,075	1,487 00	9,841 00
Chelan	97,313	30,397 00	9,321	11,514 00	41,911 00
Clallam	8,337	2,271 00	545	558 00	2,824 00
Clarke	105,995	30,517 00	7,585	11,808 00	42,325 00
Columbia	11,000	3,300 00	1,080	1,728 00	5,028 00
Cowlitz	58,310	14,719 00	1,364	1,888 00	16,602 00
Douglas	9,125	2,920 00	550	880 00	3,800 00
Ferry	12,245	4,692 00	845	1,504 00	6,196 00
Franklin	40,255	14,062 00	1,320	2,121 00	16,183 00
Garfield	1,800	540 00	25	40 00	580 00
Grant	13,010	4,484 00	755	896 00	5,380 00
Grays Harbor	416,139	120,897 00	13,226	17,563 00	138,460 00
Jefferson	61,844	18,067 00	2,965	5,687 00	23,724 00
King	5,042,062	1,589,764 00	324,451	531,746 00	2,121,510 00
Kitsap	152,880	48,489 00	4,433	8,978 00	57,467 00
Kittitas	155,071	49,297 00	4,342	6,084 00	55,381 00
Klickitat	16,710	4,584 00	319	464 00	5,048 00
Lewis	156,261	42,502 00	5,654	7,967 00	50,469 00
Lincoln	26,317	7,961 00	1,123	1,665 00	9,626 00
Mason	8,650	2,200 00	80	98 00	2,298 00
Okanogan	25,298	8,171 00	2,113	2,449 00	10,620 00
Pacific	115,360	31,451 00	2,389	3,719 00	35,170 00
Pend Oreille	20,030	6,916 00	510	736 00	7,652 00
Pierce	986,652	311,014 00	58,787	69,992 00	381,006 00
Skagit	142,441	40,975 00	3,796	4,557 00	45,532 00
Skamania	1,575	388 00	205	208 00	591 00
Snohomish	632,140	179,598 00	19,725	24,506 00	204,099 00
Spokane	2,121,663	780,239 00	204,997	278,507 00	1,058,746 00
Stevens	29,665	9,044 00	715	1,094 00	10,138 00
Thurston	119,849	36,226 00	10,716	14,062 00	50,278 00
Walla Walla	213,635	68,409 00	17,337	17,737 00	81,146 00
Whatecom	338,300	113,427 00	58,140	62,529 00	175,956 00
Whitman	118,634	33,851 00	7,998	12,467 00	46,318 00
Yakima	132,479	39,822 00	14,017	18,704 00	57,526 00
Totals.....	11,437,518	\$3,656,297 00	777,965	\$1,126,676 00	\$4,784,973 00
Total export into Oregon produced in Washington	606,476	86,508 63	2,346,054	2,228,571 30	2,315,074 93
Grand totals..	12,043,994	\$3,744,800 63	3,124,019	\$3,355,247 30	\$7,100,047 93

BUTTER PRODUCTION IN STATE BY COUNTIES.
DURING YEAR JULY 1, 1914, TO JUNE 30, 1915.

COUNTY	Pounds of Butterfat Used	Pounds of Butter Made	Value of Butter	Pounds of Butter Exported
Adams	17,611	21,156	\$7,284 00	.....
Benton	71,074	84,930	24,982 00	.....
Chelan	6,407	7,473	2,242 00	.....
Clallam	751,824	927,143	268,967 00	.....
Clarke	198,455	245,280	75,720 00	8,347
Cowlitz	179,583	217,146	65,144 00	44,933
Ferry	104,142	126,374	37,912 00	40,025
Grays Harbor	339,437	416,025	119,989 00	.....
Island	200,425	248,935	75,235 00	.....
Jefferson	247,833	310,254	93,441 00	.....
King	2,994,112	3,720,672	1,136,519 00	1,135,652
Kittitas	537,568	673,979	202,463 00	6,519
Kitsap	135,761	163,644	51,253 00	.....
Klickitat	74,181	92,928	28,352 00	50,000
Lewis	632,264	803,680	268,597 00	.....
Mason	56,827	69,484	17,507 00	.....
Okanogan	267,772	323,025	96,444 00	11,177
Pacific	1,620	1,897	616 00	.....
Pierce	1,168,337	1,400,290	433,497 00	45,000
San Juan	143,168	170,753	51,226 00	.....
Skagit	398,377	457,595	152,978 00	10,223
Snohomish	1,146,394	1,404,937	428,076 00	20,638
Spokane	1,261,007	1,585,320	481,258 00	3,278
Stevens	56,851	68,284	19,654 00	9,909
Thurston	333,363	409,250	128,790 00	18,720
Wahkiakum	234,865	290,826	86,643 00	246,169
Walla Walla	623,853	743,649	287,462 00	131,888
Whatcom	1,444,238	1,758,104	531,289 00	52,407
Whitman	140,049	173,211	52,306 00	.....
Yakima	1,203,168	1,478,031	443,588 00	.....
Totals.....	15,020,536	18,484,255	\$5,668,434 00	1,834,835
NOTE.—969,058 gallons of sour cream produced in this state, was imported by Oregon and made into butter by Oregon creameries. Value			478,340 60	
Total for period.....			\$6,146,774 60	

BUTTER PRODUCTION IN STATE BY COUNTIES.

DURING YEAR JULY 1, 1915, TO JUNE 30, 1916.

COUNTY	Pounds of Butterfat Used	Pounds of Butter Made	Value of Butter	Pounds of Butter Exported
Adams	1,500	1,608	\$516 00	.....
Benton	189,871	224,220	62,457 00	.....
Chelan	19,595	24,173	6,939 00	.....
Clallam	728,963	905,274	268,306 00	.....
Clarke	248,607	310,077	92,856 00	7,689
Cowlitz	177,542	276,127	48,642 00	14,000
Ferry	79,435	98,895	29,608 00	.....
Grays Harbor	172,848	216,826	64,048 00	.....
Island	182,883	228,397	65,344 00	.....
Jefferson	215,471	266,380	80,762 00	.....
King	3,191,129	3,861,931	1,226,194 00	717,000
Kitsap	167,946	210,215	60,308 00	798
Kittitas	500,280	609,716	176,488 00	6,094
Klickitat	91,610	113,731	33,884 00	81,800
Lewis	597,826	740,061	218,362 00	.....
Mason	54,635	67,132	20,140 00	.....
Okanogan	108,827	120,962	40,333 00	.....
Pend Oreille	39,408	48,749	14,675 00	2,730
Pierce	931,739	1,144,078	344,509 00	75,000
San Juan	21,054	25,617	7,127 00	.....
Skagit	534,389	620,082	208,836 00	.....
Snohomish	1,307,938	1,592,988	482,785 00	28,532
Spokane	1,487,548	1,856,870	541,202 00	115,140
Stevens	76,898	91,811	24,085 00	5,837
Thurston	390,273	477,078	149,090 00	21,840
Wahkiakum	125,262	161,998	44,196 00	92,000
Walla Walla	613,118	738,187	219,721 00	153,609
Whatcom	1,412,011	1,737,958	519,176 00	20,731
Whitman	133,975	163,257	48,151 00	28,450
Yakima	1,133,704	1,399,136	406,745 00	3,630
Totals.....	14,931,285	18,333,474	\$5,500,540 00	1,374,880
NOTE.—530,793.5 gallons of sour cream produced in this state was exported to Oregon creameries and made into butter.			333,278 26	
Value				
Total value for period.....			\$5,833,818 26	

CHEESE MADE IN STATE BY COUNTIES.
DURING THE YEAR JULY 1, 1914, TO JUNE 30, 1915.

COUNTY	Pounds	Value
Clarke	240,356	\$33,938 00
Cowlitz	67,767	9,488 00
Grays Harbor	58,097	7,553 00
Jefferson	208,580	30,609 00
Lewis	5,076	762 00
Pacific	124,808	31,201 00
Snohomish	138,685	35,709 00
Whatcom	221,712	38,217 00
Totals.....	1,065,076	\$187,477 00

CHEESE MADE IN STATE BY COUNTIES.
DURING THE YEAR, JULY 1, 1915, TO JUNE 30, 1916.

COUNTY	Pounds of Cheese Made	Value
Clarke	129,984	\$19,904 00
Cowlitz	24,040	4,100 00
Grays Harbor	223,226	34,240 00
Jefferson	223,228	31,526 00
Lewis	3,335	513 00
Pacific	122,298	18,345 00
Skagit	284,774	38,314 00
Snohomish	278,055	42,458 00
Whatcom	49,421	7,570 00
Whitman	150	30 00
Yakima	7,572	1,136 00
Totals.....	1,346,033	\$198,031 00

CONDENSED MILK PRODUCED IN STATE.

During the Year Ending June 30, 1915.

<i>Pounds of Whole Milk Used</i>	<i>Cases Produced</i>	<i>Value</i>	<i>Cases Exported</i>
185,795,817	1,926,809	\$5,618,050.00	1,046,679

CONDENSED MILK PRODUCED IN STATE.

For the Year Ending June 30, 1916.

<i>Pounds of Whole Milk Used</i>	<i>Cases Produced</i>	<i>Value</i>	<i>Cases Exported</i>
178,162,876	1,896,829	\$6,252,893.00	1,444,404

TOTAL VALUE OF DAIRY PRODUCTS IN STATE.

Period July 1, 1914, to June 30, 1916.

Milk and cream.....	\$14,883,440	93
Condensed milk	11,870,943	00
Butter	11,980,592	86
Cheese	385,508	00
Total.....	\$39,120,484	79

LIVESTOCK SANITATION.

The livestock industry of Washington represents an investment of over forty-seven million dollars (\$47,000,000.00).

Classes and value of livestock in the State of Washington for the year 1916:

Livestock in State of Washington.

HORSES.

	<i>Number</i>	<i>Value</i>
One year old.....	26,272	\$923,859 76
Two years old.....	25,554	1,335,613 68
Three years and over	44,804	3,129,025 76
Work horses	156,547	16,233,399 68
Stallions	1,105	393,036 76
Mules and asses	16,682	1,892,406 12
Total	270,964	\$23,907,341 76

CATTLE.

Yearlings	119,657	\$2,310,966 28
Two years old.....	74,417	2,460,321 92
Three years old and over.....	60,807	2,801,832 80
Milch cows	191,822	11,269,455 48
Bulls	7,917	484,555 20
Total	454,620	\$19,327,131 68

SHEEP AND GOATS.

Stock sheep and goats	493,578	\$2,644,925 17
Sheep bucks for breeding purposes	8,574	76,494 68
Total	502,152	\$2,721,419 85

HOGS.

Hogs	156,338	\$1,201,478 36
Value.....		\$47,157,371 65

During the year of 1915 there were four hundred sixty thousand (460,000) fleeces, or three million eight hundred eighteen thousand (3,818,000) pounds of wool, produced in the State of Washington.

The development of the livestock industry in Washington is receiving more attention than in the past, due principally to a realization by our farmers that the introduction of livestock as a factor in diversified farming, is essential to a sound agricultural economy. The Boys'

JOHANNA MCKINLEY SEGIS, NO. 44367.

He is a son of the world's famous King Segis, No. 36168, and the 40-pound cow, Johanna De Kol Van Beers, No. 75131, whose 120-day record of 531 pounds butter stood as a world's record for a number of years.

His wonderful conformation is very noticeably imparted to his offspring, also his producing qualities as is shown by his fine list of 34 tested daughters, one having a 33-pound record, thirteen others from 20 to 29.35 pounds butter in seven days. His entire list of tested daughters, at an average age of 3 years, 17 days, have records that average 19.55 pounds butter, 424.80 pounds milk and 3.68 per cent of fat. In this list of daughters, only four were full aged and but two were over four years old, leaving the other twenty-eight from 23 months to 3½ years of age.

Owned by Carnation Stock Farms, Seattle.

and Girls' Pig Clubs, organized under the auspices of the Extension Division of the Washington State College, have contributed in no small degree to this development. The various livestock organizations have been unusually active during the past biennium and the results of their endeavors are plainly seen. Other agencies such as the transportation companies and banking associations have all contributed their quota until it now appears that this state can boast of some of the finest and largest herds of pure bred animals in the entire country.

At the San Francisco Exhibition in 1915, the State of Washington distinguished itself by the many awards won in the livestock classes.

The Livestock Division, which has endeavored to encourage our farmers in the production of a better class of livestock through the use of pure bred sires and in the practice of good breeding methods, is primarily concerned in the health of our herds and flocks, for if these are to be annually devastated by such plagues as foot-and-mouth disease, tuberculosis, anthrax, glanders, sheep scab, etc., our agricultural prosperity will be undermined and dwarfed for all time to come.

BOVINE TUBERCULOSIS.

Bovine tuberculosis still continues to be the principal sanitary problem with which this division has to deal, and while the disease is not so prevalent in this state as compared to many others, due to our geographical situation and our stringent laws governing the importation of livestock, it still assumes proportions in some counties that materially decrease the profitable returns of many farms.

It is still to be regarded as the most disastrous disease of cattle and a menace of such economic importance that it can not be ignored by either the herd owners or the interests involved in the conservation of agricultural resources and the protection of public health. Every animal slaughtered and found unfit for food, is a direct tax on the public meat supply. Every cow which is removed from the milking string on account of tuberculosis, adds to the cost of milk production.

During the year of 1915 there were in the United States 32,644 entire carcasses and 48,401 parts of carcasses of cattle; 66,023 entire carcasses and 439,915 parts of carcasses of swine condemned by the federal meat inspectors as unfit for food on account of tuberculosis. The recent report of the United States Department of Agriculture places the annual loss from this disease at \$25,000,000.

Ever since the discovery of tuberculin by Prof. Robt. Koch in 1890 the subject of tuberculin testing of cattle as the principal method of controlling and eradicating tuberculosis has been a leading topic for discussion, both with investigators as well as laymen.

The investigations carried out by scientists in the study of this disease have been extremely numerous and important in their results, and the consensus of opinion as expressed in the report of the International Commission is that "the tuberculin test is the fundamental factor in any policy having for its object the control of bovine tuberculosis."

Much of the opposition to the tuberculin testing of cattle is due to the unfortunate attempts by some states to control the disease through the adoption of radical and harsh measures. These measures developed a spirit in the contests that followed which made it extremely difficult to obtain a dispassionate and impartial consideration of the measures that were required to relieve our farmers from the losses which they were suffering because of this disease. Any policy involving the eradication of a disease so widely disseminated, and one which

causes such serious losses to the animal industry, should provide some measure of financial assistance by the state in order to relieve the burdens which fall upon the owners of livestock.

In former years there were few advocates of the test among the stockmen of this state, and therefore the work of eradication was very much retarded, but as the good results became apparent, the usefulness of the test was admitted by intelligent, progressive men until now many of those who were formerly skeptical and suspicious are advocating its use as one of the principal factors in the advancing progress of the dairy industry.

The division has done much in an educational way through public demonstrations, lectures, etc., in acquainting the farmers with the character of tuberculosis, the means by which it is spread, and the measures necessary in its control. The farmers have been told that this problem of eradication is in a large measure their own and that they must realize that the healthy cow is the essential foundation of a herd; that the state is not in the livestock insurance business, and that true co-operation is necessary if satisfactory results are to be expected. We can state with pride that we have always found the majority of dairymen and farmers anxious to assist in the control of bovine tuberculosis under a reasonable and fair law, and in order to verify this statement we desire to respectfully direct your attention to the published tables of results made possible only through the enactment of Chapter 100, Laws 1915.

SUMMARY OF TESTS PREVIOUS TO CREATION OF THE STATE DEPARTMENT OF AGRICULTURE.

	No. <i>Herds Tested</i>	No. <i>Animals Tested</i>	No. <i>Reacting</i>
1895- 6	3	28	1
1896- 8	1	16	5
1898-00	9	40	8
1900-02	14	387	71
1902-04	36	340	40
1904-06	97	1,456	268
1906-08	115	2,828	352
1908-10	316	9,310	1,317
1910-June 10, 1913, no report			
TOTALS		14,405	2,062

TUBERCULIN TESTS UNDER STATE DEPARTMENT OF AGRICULTURE.

	No. <i>Animals Tested</i>	No. <i>Reacting</i>
June 10, 1913-June 30, 1914	6,562	349
July 1, 1914-June 10, 1915	11,280	1106

TESTS UNDER THE PROVISIONS OF CHAPTER 100, LAWS 1915.

	<i>Tested</i>	<i>Reacting</i>
June 10, 1915-June 30, 1916	28,930	1,954

Previous to June 10, 1915, no remuneration was allowed owners of cattle for animals found to be tubercular, therefore many were timid about having their herds tested, being afraid of financial disaster.

The enactment of Chapter 100, Laws of 1915, appropriating \$25,000.00 and providing for the compensating of owners for a portion of their losses through bovine tuberculosis, has been a very popular measure, and has had the endorsement of the State Grange, the Washington Pure Bred Livestock Association and various other livestock organizations as well as all public health officials. The present law provides, on the written application of the owner of any bovine animal, the tuberculin test will be applied by one of the inspectors of the Department. This inspector is a duly qualified veterinarian employed by the Department and who has given a bond to the state in the sum of \$2000.00.

Upon the completion of the test, if any tubercular animals are found, there are two courses open for the owner. He may select indemnity or quarantine. In case indemnity is selected, the reactors are appraised by the inspector and owner. In their failure to agree upon a value of the animals in question, the county agriculturist of the county is called upon to settle the matter. In case there is no county agriculturist of that county, the judge of the Superior Court of that county appoints a third appraiser. It is worthy of note that in testing more than 28,000 cattle, and in slaughtering 1842 "reactors," the confidence of the owners in the fairness of the inspectors is shown by the fact that a third appraiser has been necessary in but two instances.

As many cattle slightly affected with tuberculosis, in certain forms, are considered wholesome for meat, the cattle are slaughtered under the supervision of the inspector, who is guided in his decision as to passing the carcass for food or condemning it as inedible, by the meat inspection regulations of the Bureau of Animal Industry of the United States Department of Agriculture.

The carcasses are then sold to the best advantage and the proceeds of the sale remitted to the owner. If the proceeds of the sale do not equal the appraised valuation of the animal, the owner receives from the Department of Agriculture the difference between the proceeds of the sale and the appraised value. In no case, however, can the owner receive an amount from the Department that will make the amount received by the owner of a reacting animal, which upon post-mortem examination shows lesions of tuberculosis, more than \$35.00. On the other hand, if no lesions of the disease are found, the Department shall pay the difference between the proceeds of the sale and the appraisement, but this payment is limited so that the owner shall not receive more than \$75.00 for the total proceeds of any one animal.

The wonderful accuracy of the tuberculin test is shown in the following tables, where it will be noted that of a total of 1842 animals killed, 1790 showed upon post-mortem examination, evidences of the disease. When we consider that a few of these animals come under that class called "suspects," i. e., in which the reaction is not clearly defined, the results are truly remarkable.

SUMMARY OF TUBERCULIN TESTS.

PERIOD JULY 1, 1914, TO JUNE 10, 1915.

COUNTY	Number Animals Tested	Number Healthy	Number Reacted	Number Sus- pects	Number Quar- antined	Number Slaugh- tered	Number Herds Tested	Number Herds Free From Tubercu- losis	Number Herds Infected With Tubercu- losis
Adams	62	62					4	4	
Asotin									
Benton	1	1					1	1	
Chelan	15	15					1	1	
Clallam									
Clarke	628	593	33	2	8	30	23	8	15
Columbia									
Cowlitz	80	79	1			1	2	1	1
Douglas									
Ferry									
Franklin									
Garfield	5		5		2	8	1		1
Grant	11	10	1			1	4	3	1
Grays Harbor									
Island									
Jefferson	119	118	1			1	3	2	1
King	1,161	1,076	82	3	1	81	43	17	26
Kitsap									
Kittitas	179	164	15		2	13	18	6	7
Klickitat									
Lewis	27	24	3		1	2	3		3
Lincoln									
Mason	6	6					1	1	
Okanogan									
Pacific	88	88					1	1	
Pend Oreille									
Pierce	3,592	2,728	864		80	894	121	45	76
San Juan									
Skagit	121	104	17			17	6	1	5
Skamania									
Snohomish	1,306	1,296	9			9	132	127	5
Spokane	724	697	27			27	38	24	14
Stevens	44	44					1	1	
Thurston	450	437	13		4	8	9	6	3
Wahkiakum									
Walla Walla	615	610	5			5	35	32	3
Whatcom	282	280	2			2	6	5	1
Whitman	701	695	6			6	27	21	6
Yakima	1,064	1,042	22			22	38	26	12
Totals	11,280	10,160	1,106	5	44	1,062	513	833	180

TABLE NO. 1—SUMMARY, TUBERCULIN TESTS.

JUNE 10, 1915, TO JUNE 30, 1916.

COUNTY	Number Tested	Number Healthy	Number Diseased	Number In Quarantine	Number Slaughtered	Number Slaughtered With Appraisals	Number Cows Not Showing Lesions	Number Herds Tested	Number Healthy Herds
Adams	85	85						5	5
Benton	908	879	27		27	26	1	116	104
Chelan	41	36	5		5	4		2	
Clarke	1,386	1,256	140	2	188	124	15	81	53
Columbia	1		1		1			1	
Ferry	3		3	3				1	
Grant	15	14	1		1	1		1	
Grays Harbor	1,426	1,393	33		33	31	1	79	61
Island	20	20						5	5
Jefferson	255	246	9		9	7		8	3
King	4,681	4,250	431	67	874	836	5	556	454
Kitsap	80	70	10		10	10		8	7
Kittitas	180	168	12		12	10		11	9
Lewis	450	438	12	2	10	10		26	23
Lincoln	130	125	5		5	1		3	1
Okanogan	327	325	2		2	1		45	43
Pacific	97	97						6	6
Pierce	5,565	5,033	532	2	530	457	2	464	371
Skagit	642	585	107		107	106	12	29	15
Snohomish	4,687	4,436	251	8	243	240	3	402	342
Spokane	3,343	3,175	168		168	153	1	218	187
Thurston	1,039	1,023	16		16	14	2	48	38
Wahkiakum	355	316	39	33	6	6		15	9
Walla Walla	633	629	4		4	3		44	41
Whatcom	951	881	70	1	69	66	2	39	34
Whitman	488	442	46		46	41		24	19
Yakima	1,134	1,104	30	4	26	23	7	55	42
Totals	28,930	26,976	1,954	112	1,842	1,699	52	2,292	1,871

TABLE NO. 2.—SUMMARY, TUBERCULIN TESTS.

JUNE 10, 1915, TO JUNE 30, 1916.

COUNTY	Number Reacting Animals Slaugh- tered With Appraisals	Number Passed for Food	Number Con- demned	Total Appraised Value	Amount Realized from Sale of "Passed" Animals	Amount Realized from Sale of "Con- demned" Animals	Amount Indemnity Paid by State on "Passed" Animals	Amount Indemnity Paid by State on "Con- demned" Animals	Total Amount Indemnity Paid by State
Adams	.....	.....	.....	.....	\$176 72	\$75 56	\$46 70	\$468 54	\$515 24
Benton	26	7	19	\$743 00	.....	18 70	.....	61 30	61 30
Chelan	4	.....	4	80 00	.....	140 47	.....	1,300 09	1,870 18
Clarke	124	79	45	3,844 00	2,054 00	.....	570 09	.....	.....
Columbia	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ferry	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grant	1	.....	1	30 00	.....	5 70	.....	24 30	24 30
Grays Harbor	31	7	24	883 00	101 67	95 92	76 08	567 08	643 16
Island	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jefferson	7	3	4	225 00	55 50	10 00	49 50	110 00	159 50
King	336	224	112	10,369 08	5,455 07	234 76	1,902 95	3,669 52	5,572 47
Kitsap	10	6	4	207 00	87 53	96 47	19 95	65 53	85 48
Kittitas	10	5	5	252 00	136 00	21 00	11 00	94 00	105 00
Lewis	10	7	3	350 00	180 95	18 00	64 05	87 00	151 05
Lincoln	1	1	.....	35 00	38 00	.....	.....	.....	.....
Okanogan	1	1	.....	30 00	15 00	.....	15 00	.....	15 00
Pacific	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pierce	457	265	192	14,513 00	10,068 51	861 00	706 92	5,290 00	5,996 92
Skagit	106	69	37	3,369 50	1,301 79	97 43	1,068 67	941 52	2,010 19
Snohomish	240	133	107	5,675 50	2,834 18	260 08	769 87	2,231 76	3,002 63
Spokane	153	92	61	4,433 08	4,781 99	284 29	25 80	1,395 71	1,421 51
Thurston	14	5	9	415 00	118 79	35 00	46 21	215 00	261 21
Wahkiakum	6	6	.....	167 00	.....	15 51	.....	151 49	151 49
Walla Walla	3	3	.....	142 50	79 20	.....	80 00	.....	80 00
Whatcom	65	18	47	1,886 50	349 72	228 43	124 24	1,251 06	1,375 30
Whitman	41	40	1	1,420 00	1,600 00	6 00	.....	14 00	14 00
Yakima	23	12	11	563 00	356 80	24 20	91 20	190 80	282 00
Totals	1,669	983	686	\$49,603 12	\$29,791 42	\$2,468 60	\$5,668 23	\$18,128 70	\$23,797 98

TABLE NO. 3.—SUMMARY, TUBERCULIN TESTS.
JUNE 10, 1915, TO JUNE 30, 1916.

COUNTY	Per- centages of Reactors	Average Appraisal	Percentage Passed for Food	Average Amount Received from Sale of "Passed" Reacting Animals	Average Amount Received from Sale of "Con- demned" Reacting Animals	Average Amount Indemnity Paid by State on "Passed" Animals	Average Amount Indemnity Paid by State on "Con- demned" Animals	Average Amount Indemnity Paid by State
Adams	2.98%	\$28 61	26.92%	\$25 24	\$3 97	\$6 67	\$24 66	\$19 81
Benton	12.19%	20 00			4 67		15 32	15 32
Chelan	10.02%	31 01	63.71%	28 53	3 12	7 22	28 89	15 08
Clarke	100.00%	No app	raisa					
Columbia	100.00%	In quar	antine					
Ferry	6.67%	30 00			5 70		24 30	24 30
Grant	2.32%	26 87	22.58%	14 52	3 99	10 87	23 62	20 74
Grays Harbor								
Island								
Jefferson	3.58%	32 14	57.14%	18 50	2 50	16 50	27 50	22 78
King	9.12%	30.89	66.67%	24 31	2 12	8 57	32 88	16 68
Kitsap	12.50%	20 70	60.00%	14 59	9 12	3 32	16 38	8 55
Kittitas	6.66%	25 20	50.00%	27 20	4 20	2 20	18 80	10 50
Lewis	2.67%	35 00	70.00%	25 85	6 00	9 15	29 00	15 11
Lincoln	3.85%	35 00	100.00%	38 00				
Okanogan	0.62%	30 00	100.00%	15 00		15 00		15 00
Pacific								
Pierce	9.56%	31.75	57.98%	38 00	4 63	2 63	27 55	13 12
Skagit	16.66%	31.78	64.48%	18 87	2 90	15 48	25 44	18 78
Snobomish	5.35%	23 64	55.42%	21 31	2 43	5 79	20 87	12 51
Spokane	5.07%	29 00	59.83%	52 26	4 61	0 28	22 89	9 35
Thurston	1.38%	29 63	35.71%	23 76	3 88	9 24	23 88	18 66
Wahkiakum	10.98%	27 83			2 56		25 25	25 25
Walla Walla	0.64%	47 50	100.00%	26 40		26 67		26 67
Whatcom	7.36%	29 02	27.69%	17 43	4 86	6 90	26 62	21 02
Whitman	9.85%	34 63	97.58%	40 00	6 00		14 00	14 00
Yakima	2.64%	25 35	52.17%	29 73	2 20	7 00	17 84	12 26

RECOMMENDATIONS

Unfortunately the division was obliged to suspend the tuberculin test work on July 1st, as there was only a small balance remaining in the fund, and consequently hundreds of cattle owners were notified that their applications could not be acted upon.

FORWARD SOMERSET DUCHESS, NO. 167221.

At the age of four years, 28 days, she made the remarkable world's record of 28,448 pounds milk in one year, testing 1,019 pounds butter. This record was strictly official for the entire 365 days. During her best seven days of this test, she produced 725 pounds milk and 28.30 pounds butter.

The photograph shown above was taken at the completion of her yearly test, and shows a remarkably well developed udder and general conformation.

A tabulated record of her performance follows:

<i>No. Days</i>	<i>Milk</i>	<i>Butter</i>
7.....	725.4	28.30
30.....	2,840.1	106.15
60.....	5,699.5	203.02
90.....	8,547.4	298.68
180.....	16,528.8	575.10
365.....	28,448.1	1,019.41

Owned by Carnation Stock Farms, Seattle.

The test work on July 1st was in full swing as a result of our educational program and the fair and liberal provisions of the Act, and great enthusiasm existed among the dairymen; so it was with feelings of profound regret that this work was suspended.

As previously stated, the work has had the endorsement of the leading livestock associations and other organizations, and if this record is to serve as a criterion of what we may expect to do in the future it naturally follows that greater demands will be made upon this department for the betterment of the livestock industry of the

state. Therefore, it is urgently recommended that not less than \$100,000.00 be appropriated for the enforcement of Chapter 100, Laws 1915, during the next biennium.

We take no hesitancy in saying that with this amount of money we can practically eradicate bovine tuberculosis from Washington, as we now know, as a result of past work, where the infected districts are, and can confine our principal efforts at those points.

It will be noted that in the fight for the healthy cow as regards bovine tuberculosis, the question has been treated by the Department principally from an economic basis, and while the question is one that the stockmen must face from this point of view, there is another side that concerns the public—that of the public health. The health officers of many of our municipalities are now demanding certificates of health for the dairy herds supplying their cities with milk. The Department is lending its aid in each case by testing these herds free of charge.

**RESOLUTION ADOPTED BY THE CONVENTION OF MILK PRODUCERS
AND OTHER DAIRY INTERESTS OF THE UNITED STATES AT
WASHINGTON, D. C., MAY 5 AND 6, 1916.**

WHEREAS, the presence of tuberculosis in cattle is a menace to the profit of the breeder and the dairy farmer; and,

WHEREAS, its presence in the herd can, as a rule be detected by the application of the tuberculin test by men skilled in its use and when administered under proper conditions.

Resolved, That this convention urges breeders and handlers of all classes of dairy cattle to weed out reactors from their herds as a matter of protection to their own financial interests, either consigning them to the butcher or segregating them in the herd, when they are of sufficient value to warrant such manner of handling;

Resolved, That this convention heartily endorses the State-accredited herd plan of inducing breeders voluntarily to offer their herds for official test and secure a certificate which will accredit their cattle to any State without retest;

Resolved, That reasonable compensation should be allowed by Federal and State authorities for all animals slaughtered in the eradication of tuberculosis. This compensation should not be arbitrarily limited by the statute, but should be fixed by appraisal in each case, or by court decision on proof of the value of the slaughtered animals.

PURE BRED ACCREDITED HERD PLAN.

The Department has under consideration a plan to recognize tuberculosis-free pure-bred herds through the accredited system. This system is based upon the fact that the intending purchaser of cattle, to protect his herd from this disease, should deal with the healthy herd as a unit instead of the individual animal, as it has long been recognized that incipient cases of tuberculosis may fail to give a reaction to the test. These animals may later develop the disease and introduce the infection into a herd. In the case of a purchaser securing a few animals from a breeder it has been the practice in many instances to have only those few animals tested. Such a method does not show the condition of the balance of the herd, and often the integrity of the examining veterinarian is questioned. If those animals which passed

upon his certificates later develop the disease, the blame is heaped upon the veterinarian, the purchaser oft times failing to take into consideration that the disease did exist in the herd.

From the breeder's standpoint there will be much to be gained in co-operation with the Department in this matter. For instance, it is now necessary to employ a veterinarian every time a few cattle are sold, and the cost is considerable in many cases. Through the accredited plan system a certificate can be issued from this office, provided always, of course, that we have found that the herd has been maintained free from tuberculosis. This will obviate the necessity of testing immediately prior to shipment. The United States Department of Agriculture has had this system under trial, and it is believed that our state can co-operate with them and with other states for the interstate shipment of this class of cattle.

The general rules under consideration are:

(1) The breeder shall sign an agreement to submit every bovine animal over the age of six months to the Department inspector for a test as often as may be thought necessary by the Commissioner of Agriculture to maintain the herd free from tuberculosis.

(2) He will agree to dispose of all cattle in accordance with our present law relating to bovine tuberculosis.

(3) He will add no cattle to his herd that have not passed a tuberculin test administered by a veterinary inspector of the Department of Agriculture, and under orders of the Commissioner of this Department.

(4) He will agree to comply with all rules and regulations of the Department in the matter of sanitation.

(5) He will agree not to use skim milk, whey or other dairy products originating from a non-accredited farm for the purpose of stock feeding, unless the product has first been properly pasteurized at 145 degrees F. and held at that temperature for thirty minutes.

To put this plan in operation it is necessary that we receive the co-operation of the pure bred breeders of the state. Cattle of this state, and especially the pure bred herds, show a relatively small percentage of tuberculosis, and it is to be hoped that this proposed plan of inspection, testing, and control, provided for, and certified to, by the state will afford an opportunity to the breeder to add to the value of his herd. It will have the effect of driving fraudulent dealers from the competitive market by raising the standard of the legitimate healthy herd. It will compel carefulness on the part of the breeder when in the role of a buyer he finds he must introduce new blood into his herd. And, finally, it will promote confidence in the healthfulness of these cattle, and give the buyer a knowledge of true conditions.

FOOT-AND-MOUTH DISEASE.

An outbreak of foot-and-mouth disease during the fall of 1914 presented a serious menace to the livestock industry of the United States. First appearing in Michigan, the malady spread to twenty-two

states and the District of Columbia. This disease is of such a highly contagious character and the infection so easily spread that its immediate control and eradication was of great economic significance.

There have been five outbreaks of this disease previous to the one in 1914. The first three occurred in 1870, 1880, and 1884, and were trifling when compared with those of 1902 and 1908.

In dealing with all these outbreaks a policy of quarantine and slaughter was adopted by the federal and state officials, which is the method now in common use in all countries which have so far coped with the disease. It appears better to concentrate the expense incident to the extermination of foot-and-mouth disease by purchasing and slaughtering all affected and exposed cattle after judicious appraisal, and experience in this country has demonstrated the advisability of this method.

Statement showing number of animals slaughtered and expense incurred by the federal government in connection with the destruction of animals and property, the burial of animals, disinfection of premises, etc., in the eradication of foot-and-mouth disease, October, 1914, to March, 1916:

<i>States</i>	<i>No. of Animals</i>	<i>Amts. Paid</i>
Connecticut	876	\$27,886 89
Delaware	223	6,360 09
District of Columbia.....	53	3,769 96
Illinois	79,257	1,472,049 68
Indiana	6,890	91,404 74
Iowa	3,913	68,143 67
Kansas	1,530	42,576 67
Kentucky	4,086	74,934 16
Maryland	2,782	43,907 48
Massachusetts	7,912	115,789 14
Michigan	7,841	114,067 24
Minnesota	60	1,306 62
Montana	1,656	34,883 28
New Hampshire	104	3,006 13
New Jersey	2,146	67,157 00
New York	6,265	251,092 87
Ohio	12,150	193,293 41
Pennsylvania	27,430	566,717 00
Rhode Island	1,396	41,899 66
Virginia	848	14,246 42
Washington	102	2,025 00
West Virginia	496	8,392 38
Wisconsin	4,704	69,454 10
Totals	172,720	\$3,314,363 59

The amounts paid by the several states were approximately the same as paid by the federal government. Salaries, travel, and miscellaneous expenses of bureau employees amounted to about \$1,115,000 in addition to total of statement.

WASHINGTON OUTBREAK.

On November 10, 1914, the State Department of Agriculture received information that two cars of cattle en route from Wisconsin to Roy, Wash., had been unloaded and fed on November 5th in yards at the Minnesota transfer situated near St. Paul, Minn., and that these

pens were occupied November 2d by cattle which were later found to be affected with foot-and-mouth disease on arrival in Montana. The advices indicated that this shipment would arrive over the Northern Pacific railway as it was presumed at that time to be in transit somewhere in Montana.

Dr. F. H. Mason, Spokane, Wash., and Dr. C. M. McFarland of the Bureau of Animal Industry were notified to be on the lookout for this shipment and upon its arrival inside the State of Washington to immediately quarantine all animals for subsequent developments.

LILY OF WILLOMOOR AND HER CALF.

World's record cow. Produced 84,891 pounds of milk and 3,362.05 pounds of butter fat in five years. Owned by J. W. Clise, Seattle Wash.

The cattle did not arrive at Spokane until November 13, 1914, when an examination was made in special corrals, constructed for these cattle by the transportation company. The first examination revealed a slight stomatitis, or inflammation of the mouth cavity, with no apparent lesions among any of the animals. Immediately upon receipt of this advice, the cars containing the shipment and the individuals caring for the animals, were placed in quarantine with the cattle.

On the morning of November 16th, a positive diagnosis of foot-and-mouth disease was made by the state and federal inspectors. Approximately fifty per cent (50%), or fifty-one animals, displayed lesions of foot-and-mouth disease three days after their arrival. Im-

mediate notice was given to Mr. H. S. Royce, the owner of these cattle, and on Wednesday, November 18, 1914, the shipment, consisting of thirty-two (32) pure bred Holsteins and seventy (70) grade Holsteins, were appraised. The pure bred animals were appraised at fifty dollars (\$50.00) each and the grade animals at thirty-five dollars (\$35.00) each, making a total of four thousand and fifty dollars (\$4,050.00). The appraisal was made and estimated on the beef basis, Mr. David Munroe of Spokane representing the owner, Dr. C. M. McFarland representing the federal government, and Dr. H. T. Graves the state.

By Saturday, November 21, 1914, all the cattle had been killed and cremated, cars thoroughly disinfected and all pens, litter, etc., safely disposed of.

It has been the policy of all other states of the Union to compensate the owners of condemned cattle on a basis of one-half the appraisal value, the federal government paying one-half and the state where the outbreak occurred paying the balance. The foregoing statement indicates the amounts paid by the federal government and the various states.

In handling and disposing of this one outbreak we enjoyed the fullest co-operation by the owner of the cattle, Mr. H. S. Royce, Kapowsin, Wash. During the 1915 legislative session it was recommended that Mr. Royce be reimbursed, after the policy prevailing in other states, but unfortunately this was not done. I sincerely trust that the next legislature may see the justice of this recommendation and allow Mr. Royce \$2,050.00, which is one-half the appraised value of the cattle destroyed in 1914. He has received this amount from the government. The actual value of the animals was many times that amount, as thirty-two of them were registered and of pure breeding. We were certainly fortunate in having the assistance of Mr. Royce, for if the infected animals had been held in quarantine on account of legal restrictions, it is likely that the situation would have been very serious in so far as the livestock industry of this state is concerned.

Subsequent to the Spokane outbreak the Department traced and examined every shipment of livestock that had entered the state since October 1, 1914, and supervised the disinfection of 2,000 livestock cars and every public stock yard in the state.

Quarantine restrictions against an importation of livestock from other states were enacted and every additional precaution taken against a recurrence of the trouble.

GLANDERS.

For many years the prevalence of glanders among the horses of the Commonwealth has been widespread.

<i>Years</i>	<i>Animals Tested and Examined</i>	<i>Animals Reacting and Destroyed.</i>
1895-6	138	15
1896-8	34	20
1898-00	58	46
1900-2	156	41
1902-4	238	24
1904-6	967	107
1907-8	1,407	131
1909-10	1,698	255
1913-14	1,810	28

During the period of this report we have investigated 125 different reports of this disease. There have been 1,234 horses tested with Ophthalmic Mallein, or the blood complement-fixation test. One hundred and fourteen (114) horses reacted and have been destroyed.

The problems connected with the suppression of this disease are many and difficult of solution.

A very important factor in the success of our method of control has been the prompt killing of animals showing clinical symptoms. Exposed animals are tested with the Ophthalmic Mallein test and all positive cases are also destroyed. The premises, stables, troughs, etc., are all carefully disinfected under the supervision of the examining inspector.

We are usually able to complete the destruction of diseased animals without difficulty, but occasionally we find an owner who is inclined to hide the disease. These cases are troublesome and ordinarily involve court procedure. Destruction of diseased animals under these conditions is carried out on the principle of abating a public nuisance.

The disease has appeared in Adams, Columbia, Chelan, Douglas, Franklin, Ferry, Garfield, Grant, King, Lincoln, Okanogan, Spokane, Walla Walla, Whitman and Yakima counties.

The following rules and regulations relating to the control of glanders are now in force:

STATE OF WASHINGTON—DEPARTMENT OF AGRICULTURE

ORDER NO. 5.

Rules and Regulations Concerning Glanders or Farcy.

1. In all cases of suspected glanders or farcy, the owner or party in charge shall immediately isolate the suspected animals, then notify the commissioner of agriculture, describing symptoms exhibited by suspected animals, and advising of the present location of the isolated animals.

2. When the Commissioner of Agriculture or his regularly authorized agent determines by unmistakable examination that an animal is affected with a dangerous, communicable disease known as glanders or farcy, such animals shall be destroyed and the carcasses immediately disposed of by burning or burying not less than six (6) feet in the earth.

3. Immediately after slaughter the premises must be thoroughly disinfected as prescribed by the examining Veterinarian. All exposed or contact horses must be quarantined on the premises and tested with mallein or complement fixation test at the earliest possible moment, and all typical reactors destroyed. After the premises and all objects with which the diseased animals

have come in contact have been burned or thoroughly disinfected, all animals mallein tested that have failed to react may be released from quarantine.

Sec. 2, Chapter 100, Laws of 1915.

WILSON JOHNSTON,

ELMER E. HEG,

FREDERICK R. HEDGES,

MRS. MARION M. MCCREEDIE,

State Board of Health.

Effective June 11, 1915.

H. T. GRAVES,

Commissioner of Agriculture,

Olympia, Wash.

HOG CHOLERA.

Hog cholera continues to be a menace to the swine industry of the state, and although it has not reached the degree of prevalence as reported in our first biennial report it is still a factor to be considered by the hog raisers.

Walla Walla, Whitman, Okanogan, Klickitat, and Yakima counties have been most seriously affected, but by prompt quarantine and serum inoculation measures coupled with sanitary requirements and disinfection of the premises, I am pleased to state that the ravages of this disease are abating.

The outbreak in Walla Walla county reached such proportions in 1914 that the following quarantine was issued from this office December 11, 1914:

STATE OF WASHINGTON—DEPARTMENT OF AGRICULTURE.

OLYMPIA, WASH., Dec. 11, 1914.

"The fact has been determined and notice is hereby given that a contagious, communicable disease, known as Hog-Cholera exists in the swine of Walla Walla County.

Now, therefore, I, H. T. Graves, Acting Commissioner of Agriculture, under authority conferred by Section 2, Chapter 167, Laws of 1895, do hereby quarantine that portion of Walla Walla County, twelve (12) miles up Mill Creek, East from Walla Walla; thence, South four and a half ($4\frac{1}{2}$) miles to State Line; thence, West along the State Line to Twilight; thence, along the course of the State Macadamized Highway to Walla Walla, the place of beginning.

During the existence of this quarantine the movement, or trailing, or driving of swine, or the carcasses of swine, from the area hereinbefore quarantined, to any point outside the quarantined area, is prohibited, except said movement of swine be for immediate slaughter under U. S. Government meat inspection regulations, or after the carcasses of swine have been passed by State or Federal inspectors for food purposes.

(Signed) H. T. GRAVES,

Acting Commissioner of Agriculture."

These restrictions remained in force until the spring of 1915, when conditions warranted the revocation of the quarantine, and on order issued from this office March 6, 1915, again placed this district in the free area.

An attempt by members of a serum company of Oregon to secure immune hogs for an anti-hog-cholera serum plant located at North Portland, infected a number of hogs near Goldendale, Klickitat county, during the winter of 1916, in which approximately 200 animals were involved. This incident brings forcibly to mind the vigilance, care

and technique required in handling hog cholera virus without danger to the health of the animals. Such a danger as this was foreseen when the following order was issued:

STATE OF WASHINGTON—DEPARTMENT OF AGRICULTURE.

ORDER NO. 4.

Regulations Governing the Sale, Distribution and Use of Anti-Hog-Cholera Serum, Also the Sale and Distribution and Use of Serum and Virus Within the State of Washington.

1. All anti-hog-cholera serum sold within the state or imported into the State of Washington for sale, distribution or use shall be produced under a license issued by the U. S. Bureau of Animal Industry, Department of Agriculture.

(a) The use of anti-hog-cholera serum is not restricted in any way.

2. The sale, distribution or use of virus shall be prohibited except under the following conditions, to-wit:

(a) All virus used for immunizing hogs against cholera shall be administered by an authorized veterinary inspector of the Department of Agriculture.

(b) No virus shall be shipped into the State of Washington or sold for distribution except to an authorized veterinary inspector of the Department of Agriculture.

(c) All hogs subjected to the simultaneous method of immunization, together with all yards, corrals, sheds or feeding lots to which said hogs have access (which corrals, yards, sheds, or feed lots must not be adjoining a public highway), must be quarantined for a period of not less than thirty days. Conspicuous notices of quarantine shall be posted upon said premises in the form of a placard furnished by the Department of Agriculture.

(d) All hogs subjected to the simultaneous method of immunization must be dipped in one of the standard recognized dips before being released from quarantine, and all yards, corrals, sheds or feed lots in which said hogs had access must be thoroughly cleaned and disinfected. Dipping of hogs, thorough cleaning and disinfecting of yards, corrals, sheds or feed lots must be done under the supervision of an inspector of the Department of Agriculture.

3. Veterinary inspectors administering virus shall immediately render full report to the Commissioner of Agriculture, giving names and addresses of owners and numbers of hogs treated.

4. The violations of any of the above rules and regulations will constitute a misdemeanor.

Sec. 2, Chapter 100, Laws of 1915.

WILSON JOHNSTON,
ELMER E. HEG,
FREDERICK R. HEDGES,
MRS. MARION MCCREEDIE,

State Board of Health.

Effective June 11, 1915.

H. T. GRAVES,
Commissioner of Agriculture.
Olympia, Wash.

Realizing the possible danger of introducing foot-and-mouth disease by the anti-hog-cholera serum secured from districts in which that disease existed, Department Order No. 1, under date of April 6, 1915, prohibited the importation of aforesaid serum from certain states where that disease had been prevalent or which had been exposed. This order remained in force until August 1, 1915, on which date it was repealed by Department Order No. 8.

Department Order No. 3, relating to the control of hog cholera and swine plague is appended and is self-explanatory. As the control of this disease depends upon the co-operation of the owner, it is to be hoped that cases of deaths of hogs in which symptoms of hog cholera are shown will be promptly reported to this Department.

STATE OF WASHINGTON—DEPARTMENT OF AGRICULTURE.

ORDER NO. 3.

Rules and Regulations Relating to Hog Cholera and Swine Plague.

RULE 1. When an outbreak of hog cholera or swine plague appears, the owner must immediately notify the Commissioner of Agriculture, or an authorized veterinary inspector of the Department of Agriculture.

The said officer shall quarantine all portions of the premises upon which hog cholera exists, and placard same with card furnished for this purpose.

RULE 2. All persons, except the owner, duly authorized assistants, medical advisor, are forbidden to enter an enclosure where diseased hogs are confined.

RULE 3. Hogs must not be moved from any quarantined premises except by permission of the Commissioner of Agriculture or his authorized agent.

RULE 4. It shall be the duty of the owner, or any other person having in charge any swine that have died of any disease, immediately upon the fact of such death coming to his knowledge to burn the same to ashes and clean and thoroughly disinfect his pens, yards, and swine houses.

RULE 5. No person shall feed any hotel, restaurant or eating house swills or refuse of packing house offal to swine unless the same has been thoroughly cooked and rendered free from the possibility of carrying hog cholera or other infection that might be transmitted through a cholera infected ham or bacon rind. All dogs in a district where hog cholera is known to exist must be restrained from running at large and must be confined to owner's premises.

RULE 6. All railroad cars, steamboats and other means of transporting hogs must be thoroughly cleaned and disinfected before hogs shall be allowed shipment if for purposes other than immediate slaughter.

RULE 7. All hogs allowed to come in contact with any public corral, yard, chute, or undisinfected railroad car shall be considered as exposed to hog cholera and shall not be sold for feeding or breeding purposes unless immunized with Anti-Hog-Cholera Serum.

The violation of these rules and regulations constitutes a misdemeanor.

Sec. 2, Chapter 100, Laws of 1915.

WILSON JOHNSTON,

ELMER E. HEG.

FREDERICK R. HEDGES,

MRS. MARION M. MCCREEDIE,

State Board of Health.

Effective June 11, 1915.

H. T. GRAVES,
Commissioner of Agriculture,
Olympia, Wash.

ANTHRAX.

Anthrax is primarily a disease of domestic animals and in some states is one of the great scourges of animal life. It is also a disease which is communicable to man, and during the past year several deaths in persons are recorded.

The disease is transmitted in a number of ways and assumes different forms, all of which are especially virulent.

During the period of this report we have investigated several reported cases of anthrax. Dr. G. A. Jones, Sedro Woolley, reported

an outbreak of anthrax on the premises of H. L. Robertson, Van Horn, Wash., in February, 1915. Blood specimens were forwarded to the federal public health laboratory at Seattle and identified as probable anthrax, so as a precautionary measure all exposed animals, numbering one hundred and two (102) head, were given anthrax vaccine and the premises thoroughly disinfected. No further losses were reported.

Dr. J. H. Woodside, Redmond, Wash., reported an outbreak of anthrax on the premises of Frank Dupius, Issaquah, Wash., in March, 1915. Laboratory examination of blood and post-mortem appearances

WILLOMOOR ETTA, THIRD.

World's record two-year-old Ayrshire cow. Record 16,621 pounds of milk, 666.06 pounds of butter fat in one year. Owned by J. W. Clise, Seattle, Wash.

indicated anthrax. The exposed animals were vaccinated with no further losses.

On October 7, 1914, in a shipment of several hundred head of sheep received at the packing establishment of Frye & Co., Seattle, from Leavenworth, Wash., there were a large number of dead animals and others sick. The post-mortem appearance of the animals indicated anthrax, and we were therefore advised accordingly by Dr. J. Madsen, inspector-in-charge at Seattle. Chelan and Okanogan counties were placed under temporary quarantine pending further investigation and the movement of sheep from these counties suspended. Several bands

of sheep which had just moved overland from these counties were traced and examined by our inspectors with negative results.

The inspectors also traced and examined 3,500 sheep of the band from which the Seattle shipment was made. No evidences of disease could be found in this band. The following report indicates the completeness of this investigation:

NORTH YAKIMA, WASH., Oct. 16, 1914.

"H. T. Graves, Olympia, Wash.

DEAR SIR: My findings regarding the reported outbreak of anthrax were as follows: On October 1st the bands belonging to Forest Wenner of this city were corraled at a point approximately fifteen miles southwest of Pateros in (according to reports) good health, the lambs were separated from the ewes, the former were driven to the stock yards at Pateros, the latter in a southeasterly direction to the Columbia River Ferry at Entiat (the former place in Okanogan County, the latter in Chelan). On Monday morning the lambs were loaded aboard cars furnished by the Great Northern Railway and shipped to Frye & Co., at Seattle.

The ewes were crossed over the Columbia River at Entiat into Douglas County and driven in a southerly direction with White Bluffs as their objective point. The ewes were crossed on Tuesday and Wednesday, October 5th and 6th.

The first manifestation of disease or sickness appeared among the lambs about twenty-four hours after they were separated from their mothers, and on the trail to Pateros the herders thought little of it on account of them being subject to severe exposure in the nature of a heavy snow storm. The exact number that died before loading aboard cars I have been unable to ascertain, but do not think it exceeded twenty animals.

On their arrival in Seattle there were some forty or fifty dead lambs in the cars, death at this time was supposedly due to smothering or as the results of exposure before loading and during transit. However, following unloading the fatalities increased for two days then apparently diminished, but by this time a diagnosis of anthrax had been made by the Pacific Wasserman Laboratories of Seattle, Wash., and a diagnosis of probably anthrax by Dr. Lloyd of the Marine Hospital Service, and Dr. Simpson of the Seattle Health Department Laboratories on bacteriological examination of samples taken from dead animals, and Frye & Co. ordered all sick and exposed animals slaughtered and incinerated or tanked under sixty pounds pressure. Under the direction of Dr. Madsen of the U. S. B. A. I., all pens, sheds, cars and grounds were subjected to a thorough disinfection under the direction of Drs. Madsen and Harrington, the latter veterinarian representing Frye & Co. in the investigation.

On October 12th I recommended to your Secretary, Mr. Fuller, that in the light of developments and reports it would be well as a precautionary measure to quarantine both Chelan and Okanogan Counties, pending investigation.

After making a trip to the mentioned counties and interviewing stockmen, I found that the disease was apparently confined to the sheep of Mr. Wenner, also that his sheep were then in Douglas County at a point about twenty miles North of Ephrata. Dr. Baker, who was working with me in the matter, was asked to go and examine them and if findings justified to quarantine on the first range that they could reach that had food and water sufficient.

Before going to the above mentioned district I had examined the slides at the Seattle Health Office, also their cultures and reviewed their work in general coupled with the fact that I could not find a case of an adult sheep having succumbed to the disease, either from infection or inoculation. I have come to the conclusion that whatever the disease it positively is not anthrax. My conclusions are based on the following reasons:

1. The slides examined were not typical morphologically of *Bacillus Anthracis*. They contained end spores but did not show the chain formation.

2. The laboratories (Seattle City and Marine Hospital) were not able to grow any cultures under aerobic conditions.

3. It would be impossible to have a strain of anthrax of sufficient virulence to kill lambs as rapidly as these died and not kill adult sheep also.

4. There is history of lambs having died last summer when being driven into the mountains of the Okanogan reserve, one firm losing 200, and another going to the Colville Forest Reserve losing between 600 and 800, but no adult sheep of those lost in the early summer were supposed to die from Phyto toxia, but symptoms were very similar to these. These lambs began dying when they got low down on the cattle ranges, in fact where they were separated was within five miles of the ranches where cattle have been ranging for years, but sheep have not been going into this range before the summer of 1912. No deaths have been reported in cattle only from the common cause among the unvaccinated calves from "Black Leg," Dr. Baker having furnished through your office vaccine to the ranchers.

5. The lamb inoculated experimentally at Frye & Company's yards on autopsy at which I was present showed all the post mortem symptoms of "Symptomatic anthrax" and the organisms of typical rounded end club shaped end spore formation were recovered from the intermuscular spaces, the spleen was not enlarged, there was no Hematuria, the Hemolymph glands were of normal appearance. The only changes in the lungs or liver were the usual post mortem changes. There has been in all of the slides a small organism which was gram negative morphologically of the Pasteurella group and probably the bacillus ovissepticus. From all appearances in my opinion the cause of the fatalities is either symptomatic anthrax (Blackleg) or Hemorrhagic Septicemia, and I think the former.

With this evidence on hand I recommended to your Mr. Fuller on the 14th inst. that the quarantine of Okanogan and Chelan Counties be raised, but that as a precaution I respectfully advised that all cattle and sheep shipped on any road be subject to veterinary inspection until a positive diagnosis is made. There is no trace of any disease among sheep in Yakima or Benton Counties so far as I can learn.

Respectfully,

(Signed) ROBERT PRIOR,
Veterinary Inspector.

BLACKLEG OR SYMPTOMATIC ANTHRAX.

This disease affects young cattle between the ages of six and twenty-four months and occasions great losses unless the owner takes proper precautionary measures. The disease is easily recognized as its symptoms are very characteristic and is caused by the blackleg bacillus which gains entrance into the body through abrasions of the skin. It is therefore considered a wound infection disease, and occurs with more or less regularity in certain pastures, feed lots or stables.

Prevention consists of proper hygienic and prophylactic measures. It has been found that preventive vaccination is successful and during the period the division has distributed several thousand doses of vaccine to the farmers of the state which was furnished by the United States Bureau of Animal Industry.

In addition to the distribution of this vaccine we have personally investigated and diagnosed a large number of outbreaks in those sections of the state where the disease appeared to be unknown.

RABIES.

This disease has been prevalent throughout this state during the past year but in far less degree than during the period covered by the previous report.

Practically all warm-blooded animals are susceptible to the infection of rabies, the disease being the most common, however, in the dog. We have investigated a number of outbreaks in dairy herds where the animals involved have been of valuable breeding stock and the losses severe. In two dairies in particular, one in Spokane county, the other in King county, there were a large number of high-priced cattle lost through the bite of rabid dogs.

The Department has taken active measures in the suppression of these outbreaks, and while the disease is still reported from time to time we do not feel it practical to promulgate a state-wide dog-muzzling regulation at this time.

The diagnosis of this disease involves the laboratory examination of the brain of the suspected animal, and we are greatly appreciative of the co-operation of the state board of health and the city of Seattle for the many laboratory courtesies extended.

ACTINOMYCOSIS (LUMPY JAW).

A large number of cases of this disease have been investigated. Affected animals are either destroyed or quarantined for treatment, depending on local conditions and the extent of the infection.

CONTAGIOUS KERATITIS.

An infectious disease involving the eyes of cattle. We have investigated several outbreaks of this trouble in Western Washington, which have been effectively controlled through proper treatment. No animals suffering from this trouble have been slaughtered during the past period.

SHEEP SCABIES.

In April, 1915, Dr. C. M. McFarland, inspector-in-charge, United States Bureau of Animal Industry, Spokane, Wash., advised us that sheep scab had been reported in sheep and goats near Hartline. An investigation confirmed this report, except that only goats and no sheep were involved. All affected and exposed animals were immediately quarantined and ordered dipped, under our supervision, with no further spread of the infection.

VERMINOUS BRONCHITIS.

This trouble is due to a parasitic invasion of the respiratory apparatus. It is commonly called "lung worm disease." Wet seasons favor the development of the disease, as moisture insures the life of the embryo outside of the animal body; therefore the complaints and re-

quests for investigation have been extraordinary during the past
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The proper control measures have been recommended in all cases.

CEREBROSPINAL MENINGITIS (FORAGE POISONING).

During the past two years we have investigated a number of outbreaks of this disease, which have been both sporadic as well as epizootic in form.

PETER PAN.

Most noted Ayrshire sire. Owned by J. W. Clise, Seattle, Wash.

The disease is not transmitted from animal to animal and is presumed to be due to the effect of toxins or poisonous products eliminated by fungi or mould on feed.

The disease occurred in Adams, Columbia, Grant, Spokane, and Kittitas counties.

In November, 1915, state aid was solicited by Mills & Sons, Ritzville, Wash., in connection with unusual losses among cattle. Three field veterinarians were at once detailed to investigate and found that

approximately forty out of eighty head of cattle had died on one farm, and approximately the same number on an adjoining ranch, with other losses in the district.

The trouble was diagnosed as forage poisoning and a complete change in feed steadily eliminated further trouble.

MISCELLANEOUS INVESTIGATIONS.

Sickness and death among domestic animals from other diseases not classified herein are more or less constantly occurring in the different localities of this state. Often these losses are reported as being due to a contagium and an investigation is necessary in order to determine the causative factors. Improper care and feeding of animals was, in many cases, the cause of such sickness, and when the advice and instructions of the inspectors were followed, the trouble ceased.

In the spring of 1915 we were hastily notified of an outbreak of disease among sheep at Boyds, in Ferry county. Investigation revealed that these losses, which totaled over 1,500 in one band of about 2,000 sheep, were due to acute poisoning by *Zygadenus* or death camas. It was necessary for the division to supervise the disposal of the dead animals and issue the customary warning to other bands.

We have also been called out on innumerable occasions to investigate similar losses due to other poisonous plants. The division has also investigated and eradicated several outbreaks of lip-and-leg ulceration in sheep and hogs caused by *bacillus necrophorus*. One band of sheep was severely affected with the venereal form of necrobacillosis.

The prompt action of numbers of the veterinary profession of the state in reporting cases of infectious diseases coming under their observation has resulted in conserving the animal health, which, in other words, is the animal wealth of the state. The Department, and the state at large, is indebted to these men for the support and assistance they have rendered.

STALLION REGISTRATION.

The stallion and jack registration law is of prime importance to the livestock industry in that it protects the public from dishonest stallion owners. All information concerning stallions or jacks can be obtained from the Department of Agriculture, where the license certificate shows a complete record of all animals.

The provisions of the statute make possible the tabulation of the exact number of pure bred stallions in the state and the removal of unsound draft stallions from public service. The law has apparently one weak feature—that of only one examination for soundness for the entire life period of the animal. As physical faults do not always develop during the first years of an animal's life, an examination and

affidavit of soundness should be submitted every second year for renewal of license, in order to insure the utmost protection to the public.

This Department should exercise control over the veterinarians examining such animals for soundness, as there are many unscrupulous veterinarians in the state, who in many ways abuse the responsibility placed upon them under the present law.

It is urgently recommended that the legislature amend the law making the expiration of all licenses for jacks and stallions take place at a certain time, preferably the first of January every second year. This recommendation is based on two reasons: First, the cost of handling the same from the Department headquarters will be cut nearly in half because of a considerable saving in postage, stationery and clerk hire. This date will be fixed in the minds of all owners of animals, and delinquency notifications will become less and less necessary. Second, the breeding season opens in March and registrations made for the year, being accompanied with the affidavit, give better measure of protection. Renewal could be compelled by statute not later than April 1st, thus giving ample time for both public and the Department.

The present law requires this Department to recognize all associations recognized by the United States Department of Agriculture. Since the passage of the act the federal department has withdrawn recognition of all societies. This brings about a peculiar condition over which the Department has no control, and recommendation is made that the present law be amended so that recognition can be granted to all associations endorsed by the National Association of Registration Boards or the National Society of Record Associations or both, as the commissioner of agriculture shall determine.

STALLIONS AND JACKS—CLASSIFICATION BY COUNTIES.

COUNTY	STALLIONS							Total Pure Bred	Total Grade	Grand Total	Number of Jacks
	Percheron	Belgian	Shire	Clydesdale	French Draft	French Coach	German Coach				
Adams	19	3	2		2		1	14	5	27	19
Asotin	4	1	3	1			1	6	2	10	8
Benton	7	1						10	1	9	13
Chelan	2	1						10	1	4	10
Challam	2			1	1			1		4	1
Clarke	3	1				1	2	13	1	10	14
Columbia	7	4						7	1	12	12
Cowlitz	2	1						1		3	1
Douglas	12	4	9	2	1	1	1	41	1	31	49
Ferry	3	1			2			3	1	5	9
Franklin	7	1	2					3	1	3	11
Garfield	4	2	1					5	1	1	6
Grant	30	2	4	1				25	1	4	23
Grays Harbor	2	1						2		1	3
Island	1	1						2		2	2
Jefferson								1			1
King	2							6			2
Knap	1									1	
Kittitas	12		1	2	2			11	1	13	11
Klickitat	6	2	2	2	2			3		15	9
Levi	3	6	1				1	3	3	16	8
Lincoln	25	11	9		3			43	3	12	50
Okanogan	13	1	4					51		6	23
Pacific		2						3		2	3
Pend Oreille		1						1		1	1
Pierce	1	1						2		2	2
San Juan		1			1			3		2	3
Shagit	2	1			1		1	4		5	4
Snohomish	2			1				7		2	7
Spokane	11	6	11		3			17	1	1	31
Surem	7						3	29	1		11
Thurston	4		1		1	1	2	7		9	7
Walla Walla	3	2	3		1		1	11	1		16
Whitcom	4	4	1					2		9	2
Whitman	20	12	23	4	2		1	43	2	10	98
Yakima	21		3	3			1	16	6	23	22
Other states	5	2	2		1			3	1	2	12
Total	274	75	95	21	23	3	15	423	20	71	526
											494
											1,020
											65

* Pure bred, 51.56% ; grade, 48.44%.

THE HORTICULTURAL DIVISION

The 1915 session of the state legislature enacted into law our present horticultural code, and in it are specified certain duties to be performed by the Horticultural Division. As members of this division we have interpreted these duties in the way that to us seems most practical and of greatest service to the fruit growing interests of the state.

The work of the Horticultural Division is now being conducted along the following lines:

1. Orchard work.
 - (a) Educational.
 - The holding of field demonstrations.
 - The holding of local meetings.
 - Field surveys for horticultural data.
 - Crop estimates for the benefit of the fruit shippers.
 - Advisory work in insect, fungus and bacterial control.
 - (b) Police work.
 - The disinfection and cleaning up of neglected orchards.
2. Nursery inspection.
 - Licensing of nurseries.
 - Inspection of nurseries.
 - The inspection of nursery stock shipped.
 - The inspection of nursery stock imported from foreign countries. (In cooperation with Federal Horticultural Board.)
3. The enforcement of the State Insecticide and Fungicide law.
4. The adoption of standard grade and pack rules for apples.
 - Inspection of fruits for grade and pack.
5. Fruit and vegetable inspection.
 - Inspection of imports and exports.
 - Pests and diseases intercepted.
6. Potato inspection.
 - (a) Educational.
 - The studying of pests and diseases with potato growers.
 - Experimental certification of seed potatoes in one field.
 - (b) Police work.
 - The inspection of potatoes shipped into the State for food or seed purposes.
7. Law of commission merchants. (Recently declared null and void by the Supreme Court.)

THE ORCHARD WORK.

This is the happiest part of our duties. Were it not for this phase of our work the police duties which are sometimes necessarily destructive in principle would grow tiresome. In this work it has been and is our aim to show the farmer how to avoid dangerous mistakes in growing, irrigating, cultivating, spraying, thinning, pruning, picking, packing, etc., that go to make a crop of higher quality.

In this work we seldom are considered as intruders. On the other hand, in the fruit districts of the state we are constantly in demand from growers who call for advice and assistance. Even many of the men we have been compelled to prosecute for negligence have called for our advice, thus indicating that their respect for our work is at least equal to the ill feeling caused by the prosecution. I have insisted that all our field men keep themselves informed as to the latest information issued by the Washington Experiment Station, and other experiment stations as well. Our men should, I believe, be able to carry much of this information to the growers in a practical way while the field visits are being made.

The principal part of the orchard work is educational, and the few cases of arrests and prosecutions that find their way into the newspapers are a very small part of the work. Trained men are necessary to make this branch of the work efficient, and although all our men are not college men, we have a very good hard working set of men in the Horticultural Division.

During the past three or four seasons there has been a general increase of enthusiasm for fruit growing; however, the duties placed upon this division have been greatly increased. The duties that fall to all the members of this division require a great amount of diplomacy to get results, and as the scope of the work is now broader than has ever been attempted before in this state, it has necessarily meant greater activity on the part of our inspectors.

Pear Blight. The dreaded pear blight disease has been raging in certain districts of the state since 1910, and the excitement and realization of its seriousness probably reached its zenith during the growing season of 1914. The feeling among the mass of growers will naturally decline now, but the disease is the same serious malady, and our efforts will have to be expended vigorously to encourage uniform methods throughout the orchard districts. The enforcement of the inspectors' notices will do much to push this along, but educational work in the way of orchard demonstrations is more important and effective.

In handling blight the inspectors are instructed to get the owner of the orchard to go over the work already done and explain any mistakes that are being made. Then to demonstrate the proper methods of cutting and disinfecting the tree and to explain other details incidental to the work, such as bridge grafting methods for saving girdled trees, etc. After five years of pear blight work I am confident that the control of this disease is practical but that the complete eradication is hardly possible. Farmers may read and be told much of the necessary details of this work, but some of them, failing to realize the real value of sterilization and other necessary points, often drift back into careless ways only to find within a year or two that their carelessness has been an expensive schooling.

To explain further our viewpoint in going about the orchard work will say in a way we liken ourselves to the salesman who attains success in selling goods. The salesman cannot force a man to buy of him, but if he is handling a thoroughly reliable and valuable article, and if the salesman has unbounded confidence in it the man is influenced to believe he needs the article and is thankful to the salesman for selling him the article that has proved profitable to him. In other words the economics of orcharding are staring the fruit grower in the face, and we are always trying to convince the newcomer or the negligent owner or superintendent, as the case may be, that certain details are an improvement over his present methods, and that he really needs to adopt that particular practice to get better results. The details of the pear blight work are many, and owing to the character of the work cannot be reported in figures as to amount done or results accomplished. The results obtained to date plainly show that the educational work has accomplished more and better results than has the exercise of police power. There are cases, however, where prosecution is the only way to get the work done, and in such cases the arrests have been made or the work has been done at the owner's expense.

Apple Mildew. Previous to the season 1914 powdery mildew had not been regarded seriously in either the Wenatchee, Yakima or Walla Walla valleys, where the results of this injury have since become more apparent. Last year this disease was found on the trees early in the spring. It was found on the twigs and in abundance on the new growth of foliage. The effect of the mildew on the fruit itself shows as the apple reaches maturity in the shape of irregular network or scratches, sometimes covering quite a large area on the surface of the apple, thus injuring the appearance of the fruit and lowering its market grade.

The Jonathan has been the most seriously affected of the commercial varieties. In some orchards these were so badly marked that the growers have found that this disease has been the cause of many apples being excluded from the extra fancy grade. Many of the varieties have been affected by the disease but to a much less extent. It seems, however, that the greatest damage done as a result of powdery mildew infection is that the vitality of the tree is weakened and sets fewer fruit buds. It has been observed that during a period of three years' infestation by powdery mildew in some orchards that the crop has been reduced to practically nothing as a result of fruit bud injury. With this thing in view the inspector at Prosser carried on during the 1915 season a very interesting orchard demonstration for the control of apple mildew. A particular orchard, of which he had a record of former crops and handling methods, was sprayed according to a schedule worked out by W. S. Ballard of the U. S. Department of Agriculture. The materials used were iron sulphide, atomic sulphur and milled sulphur. In this particular orchard the trees had been gradually weakened by this fungus until there had practically been no crop during the past two seasons.

The sprays applied practically controlled the disease and an examination of the trees for fruit buds during September showed a marked contrast to that of the previous year. Orchard demonstrations were carried on in the Walla Walla district for mildew sprayings beginning as late as the 11th of May in a number of orchards along the state line, and in the Touchet valley of Columbia county. Observations made July 8 and September 18 show that even with applications applied at those late dates the results were surprisingly effective. In the Wenatchee valley spraying for mildew has been carried on quite generally, but has been done principally with iron sulphide. There has been a considerable amount of scorching reported to have been caused by this material, which has not been the case where atomic sulphur and milled sulphur were used, and it seems quite likely that the two last named materials will be used another season in its stead.

Grape Mildew. In 1914, as well as in the season of 1915, mildew was the cause of a great deal of damage to the vineyards about Kennewick. The owner of a vineyard near Kennewick stated that mildew in his grapes had so discouraged him that he had almost made up his mind to pull up the vineyard. In the spring of 1915 the inspector arranged with this man for a co-operative spraying demonstration for mildew control. The results have been very good indeed and the owner is greatly pleased.

In this demonstration four materials were used on four separate blocks of the vineyard. Dry sulphur, sulphide of iron, milled sulphur, and atomic sulphur were the materials used, and are materials quite generally recommended by experiment station bulletins for the control of mildew. Dry sulphur gave poorest results. Sulphide of iron, atomic and milled sulphur gave almost perfect results, and the owner was able to market several hundred baskets where he marketed little or none the year before. The demonstration has had the attention of a number of grape growers in that vicinity and they are greatly encouraged and pleased with the results.

In the White Salmon and Goldendale districts an unprecedented amount of mildew developed in grapes the season of 1915. The grape growers there maintain that it is the first season they have been troubled with grape mildew, and injury amounting to half of the crop in some vineyards has greatly discouraged those growers. Our inspectors have urged the adoption of mildew control sprays by these people and have given them the benefits of the demonstrations carried on at Kennewick.

Aphis Sprays. A year ago in the vicinity of Wenatchee, the inspector carried on a series of orchard sprayings to determine a spray material for aphis that was both effective and cheap. After trying out a number of materials he decided that tobacco sprays were most effective, but used alone were expensive. He used a number of materials in combination with Black Leaf 40, and found that weak solu-

tions of Black Leaf 40 were greatly increased in effectiveness by the addition of lime. Black Leaf 40 in combination with lime has been used by a number of growers in Wenatchee, Grandview and Walla Walla districts with very satisfactory results.

It has been noticed for some time that aphids and ants were largely responsible for the dissemination of a large proportion of the summer spread of blight. This cheaper spray material, which is very effective for aphids, will be of much assistance in blight control work, if conscientiously used to control the insects largely responsible for the dissemination of this disease.

In the work with summer sprays the object was to obtain combination of efficiency and cheapness. Although in the test the following dilutions gave results, they are of much greater dilutions than generally used:

Formulae for 200 Gallon Tank.

	Cost
Black Leaf 40, 1 Pt. (1-1600), liquid whale oil soap, 6 qts.....	\$1 95
Black Leaf 40, 4-5 Pt. (1-2000), liquid whale oil soap, 6 qts.	1 68
Black Leaf 40, 1½ Pt. (1-1200) arsenate of lead, 6 lbs.....	2 30
Black Leaf 40, 1 Pt. (1-1600), arsenate of lead, 6 lbs.....	1 86
Black Leaf 40, 4-5 Pt. (1-2000), arsenate of lead, 6 lbs.....	1 59
Black Leaf 40, 1 Pt. (1-1600), lime, 4 lbs.	1 43
Black Leaf 40, 1½ Pt. (1-1200), lime, 4 lbs.....	1 88
Black Leaf 40, 4-5 Pt. (1-2000), lime, 4 lbs.....	1 16
Black Leaf 40, 3-5 Pt. (1-1000), miscible oil No. 1, 4 gals.....	3 16

In applying these sprays a pressure of 200 pounds and greater was maintained throughout and the work done as thoroughly as possible. Quassia chips and whale oil soap, the old and recognized aphid spray, gave the least satisfactory results. Quassia chips and whale oil soap:

Twenty pounds chips.....	\$1 70
Ten pounds soap.....	85 \$2 55

Temporary results were obtained from Black Leaf 40 in all the accompanying combinations, but only the stronger solutions are being recommended. The materials in combination were first tried out in a commercial scale by our Wenatchee inspector, but have since been used in various proportions experimentally and commercially by our inspectors at Walla Walla, Prosser and North Yakima.

Blister Mite. Blister Mite caused considerable injury to fruit, particularly in the Zillah district during the seasons 1913 and 1914, and was serious in unsprayed orchards during the season of 1915.

The local inspector checked a number of orchards in that locality for the effectiveness of blister mite sprays. After a thorough canvass of a number of orchards sprayed with different materials, it was found that lime sulphur applied just before the buds burst to be very effective for this pest. Trees sprayed after the buds had burst showed no less mite injury than unsprayed trees. The Colonel Walker place near Zillah is one of the orchards which is practically free from blister mite, and the results were brought about by one good spraying of

lime-sulphur just before the buds burst. In 1914 this orchard had extensive blister mite injury.

Codling Moth Survey. On September 20, 1915, a codling moth survey of the districts of Wenatchee, Yakima, Kennewick, Walla Walla, Kettle Falls, Spokane, Clarkston and White Salmon was begun, to get in writing as near as possible the detailed operations of a large number of farmers as to their methods of codling moth control. It took a great deal of work and diplomacy on the part of the field inspectors to get these records, and a good many days and evenings too were spent in the office in Olympia studying and compiling this information.

The season of 1915 was an unprecedented one for codling moth injury. A great many farmers insist that the poor results in their arsenate spraying were due to inferior lead arsenates. Some growers have backed up this contention by arguing that before the present European war the source of the arsenic supply was in Germany, and that during the past year and a half manufacturers have had to use a less reliable grade of arsenic. Whether or not there is any foundation in this contention I am unable to say. After talking the situation over with Dr. Cardiff, as members of the Insecticide and Fungicide Board, we authorized Mr. Clawson of Wenatchee and Mr. De Sellem of North Yakima to purchase samples of twelve of the commonly used brands, buying them in the original sealed package, and send them to the chemist for analysis. Personally I am of the opinion that the methods of application and the time of doing it have been more important factors than the chance of poor leads, as chemical analysis did not disclose that any particular lead was responsible for the poor results.

In making these summaries figures have been taken from surveys from all parts of the districts and it seems should represent fair averages. Not all of the orchards surveyed have been used in the general compilation, some being discarded on account of their location being between uncared for orchards, or in isolated districts where infestation is not bad when no sprays are applied, or the orchard was young. The object was to get a fair summary which would show the average conditions where codling moth exists. The compilation of these surveys has been made usually by localities as the blanks were received, and in the case of the Yakima valley three summaries have been made, one for the valley in general, one for the lower valley, and one for the upper valley.

In most localities our inspectors placed codling moth breeding cages in order to observe the condition of the moths and determine spray dates. In this survey these spray rates are accepted as correct.

Fourteen orchards in the Grandview and Zillah districts having 455 acres of apples in bearing were tabulated. Of this number eleven sprayed before the calyx closed with power outfits and pressure ranging from one hundred and eighty pounds to two hundred and fifty pounds. Three were late in applying the calyx spray. Thirteen used the Bor-

deaux type of nozzle for the calyx spray. One used the vermorel throughout the season.

That the calyx spray was quite effective is shown by the calyx infestation at picking time, which averaged less than 1.34 per cent. There were but three growers who repeated the calyx spray within ten days.

In spraying for the first brood of worms seven were late in making the application, four were right, one early and two did not spray. For the second brood, eight were wrong, four were right and two did not spray. Three sprayed in August. The amount of lead averaged about two pounds per fifty gallons of water, and ranged from one pound to three pounds. At picking time the average per cent for these fourteen orchards was 1.34 per cent calyx wormy, and 27.6 per cent side worms. Of these fourteen orchards five were clean cultivated, nine had cover crops of either alfalfa or clover. In eight of these orchards the spray for the first brood of worms was delayed until the crop of alfalfa could be cut and taken out of the way. One of the nine farmers did not allow the cover crop to delay spraying for the first brood. This average per cent of infestation of side worms is 16.8 per cent, and the average for the eight who delayed this spray is 31.1 per cent. The number of moth sprays during the season averaged 3.5 applications. Six and seven-tenths (6.7) gallons per tree was the average for the fourteen orchards at each application.

At Wenatchee the inspector made a survey of thirty-three orchards with an acreage of 437½ acres. Of this number thirty sprayed before the calyx closed, using power outfits with pressure ranging from 175 to 150 pounds. There were three growers who repeated the calyx spray in ten days. For the thirty-three orchards the percentage of calyx worms at harvesting time was 2.2 per cent. Three of these growers did not spray for the first brood of worms, twenty were right and ten wrong in the date of application.

For the second brood ten did not spray, seventeen were right and six wrong in the date of application. Seven sprayed during the first half of August. Mildew sprays were quite generally used during the season in combination with lead arsenate. Two farmers used atomic sulphur, one used Black Leaf 40, seventeen used iron sulphide, and nine used no materials in combination with lead.

Of these orchards twenty-nine were sprayed throughout the season with Bordeaux nozzles, eight were calyx sprayed with Bordeaux nozzles, and cone nozzles were used in later sprays. Four used vermorel nozzles for all sprays. Six brands of lead were used at the average strength of 2.1 pounds per fifty gallons of water.

At picking time the average percentage for these thirty-three orchards was calyx wormy 2.2 per cent, and 22.8 per cent side worms. Of these orchards seventeen were clean cultivated, and sixteen had cover crops. In seven of these orchards the spraying for first brood of worms was delayed until the crop of alfalfa could be cut and taken

out of the way. Nine of these farmers did not allow the cover crop to interfere with the time of spraying for first brood of worms. The number of moth sprays during the season averaged 2.9 applications per orchard. Five and four-tenths (5.4) gallons per tree per application was the average for the thirty-three orchards.

In making the following summaries, figures were taken from seventy-nine orchards in all parts of Yakima county, from the Selah and Naches to Grandview. Some orchards on which records had been taken were not used in the summaries for obvious reasons. One or two were discarded because, on account of their location, surrounded as they were by uncared for orchards, they could with the utmost difficulty be kept clean, even with the most efficient sprayings. Some of the orchards in the upper Selah valley and on Tieton ridge were discarded because they were young orchards surrounded either by other young orchards or isolated so that even with no spraying they could not be as bad as some other orchards in less favorable locations would be with several sprays. The object was to get a fair summary which would show the average conditions where codling moth exists. From my own observations as well as from the figures obtained, I am positive that the chief reason for the unsuccessful work of the growers of the Yakima valley is, first, lack of thoroughness in spraying, and, second, failure to spray at the right time.

Calyx Spray.

Used at the right time.....	75
Used too late.....	2

Later Sprays.

Used at the right time.....	30
Used at the wrong time.....	48

Per cent of Calyx worms where calyx spray was used at right time, 6-10 of 1 per cent.

Per cent of Calyx worms where calyx spray was not used at right time, 3 per cent.

Per cent of worms where later sprays were used at right time, 5.1 per cent.

Per cent of worms where later sprays were used at wrong time, 20.3 per cent.

Per cent of Calyx worms where pressure was up to standard in calyx spray, .7 per cent.

Per cent of Calyx worms where pressure was too low in calyx spray, 1.4 per cent.

In these records the percentage of calyx worms is very low, but doubtless would have been considerably larger if there had been any way of computing the number of calyx worms in the apples which dropped and those that were taken off in the course of thinning.

Inspectors' Weekly Reports. This office has kept in touch with the work of the inspectors in the field, and the weekly reports which

show the work done each day of the week have made it comparatively easy. When the face of the report sheet is insufficient the inspectors have been instructed to use the back of the sheet freely for reporting details and making explanations. These reports are contained in drawer file marked "Weekly Reports" and are available for the inspection of the Advisory Board at any time.

INSPECTION OF FRUITS AND VEGETABLES.

The inspection of fruits and vegetables is regular routine work of the inspectors, particularly those covering distributing points, and the work has been carefully done. Our inspectors at ports of entry where fruits from other states and foreign countries are received, are particularly active and careful in their inspections of all imported fruits to intercept and guard our industry against the importation of pests and diseases.

A great many shipments of Washington grown fruits have been repacked under our supervision, and a number of lots condemned and destroyed for infection. These figures can be compiled from our report files, but are not included here on account of limited amount of space allotted this division.

INSPECTION AT THE PORT OF SEATTLE.

The quarantine work of the Horticultural Inspector stationed at Seattle is becoming the most important part of his duties, and new rules and regulations are being issued by the Federal Horticultural Board almost weekly covering the inspection of imported agricultural and horticultural plants and products.

A special individual permit must be secured from Washington, D. C., before one can import from any country outside the United States, nursery stock, cotton or potatoes, and then upon arrival at port of entry, Seattle, shipments must be inspected and results given in writing submitting copies to the Customs Department at Seattle, Department of Agriculture at Olympia and the Federal Horticultural Board, Washington, D. C.

Foreign quarantines now existing prohibit from certain countries the importation of Indian corn or maize, pine trees, currant and gooseberry plants, all citrus nursery stock, cotton, cotton seed and hulls, potatoes, oranges, limes, grape-fruit, mangoes, peaches, avocados, plums, sugar cane, etc.

These quarantines were established to prevent the introduction into this country of the Downy Mildews and Physoderma diseases of Indian corn, white pine blister rust and European Pine Shoot Moth in the case of pine trees; white pine blister rust on currant and gooseberry plants; citrus canker, etc., on citrus nursery stock; pink bollworm, etc., in cotton, cotton seed and hulls; potato wart, powdery scab, etc., on potatoes; avocado weevil in avocados; Mediterranean

and Mexican fruit flies in deciduous and citrus fruits and some vegetables.

The following pests were intercepted at Seattle the past year:

From Japan—*Parlatoria Pergandei* (chaff scale) on maples;

Aulacaspis Pentagona (West Indian peach scale) on cherries;

Eighty boxes Japanese pears found to very badly infested with an unknown larva. Mr. E. R. Sasser of Washington, D. C., states this larva, as yet unknown and not the Codling Moth, but very destructive;

Wistarias infected with a scale insect which California authorities were unable to identify, but said it was the largest scale ever seen.

Three or four large shipments of Manchurian corn or maize have come to Seattle the past year and were found to be badly infested with the Rice Weevil (*Calandria Oryzae*.) Now that the corn or maize is prohibited entry we do not expect to see any more of it.

We have also received several shipments of cotton, cotton waste and cotton thread from China. In the case of raw or unmanufactured cotton entering this port the same must be sent to Oakland, California, for fumigation, where the only cotton fumigation plant on the Pacific Coast exists. Certain grades of cotton waste and cotton thread are allowed entry here free from fumigation. These measures are for the purpose of preventing the introduction of the Pink Bollworm and other injurious insects.

From California we condemned five cars potatoes, eighty sacks and twenty seven boxes on account of potato tuber moth infection; also *Cotoneaster* and unknown plants which were infected with *Aspidiotus Camellia* (Greedy Scale) and *Sassetia Olea* (Black Scale.)

At two Seattle nurseries the inspector found potted lemon plants infected with *Parlatoria Pergandei* (Chaff Scale), and Junipers with Juniper Scale (*Diaspidiotus Caruelli*.)

Early in January, 1916, the Federal Horticultural Board revised its ruling on potatoes from Canada where up to that time a quarantine on account of Powdery Scab had prevented the importation of potatoes except that during 1915, sixty-two cars were imported by special permit. From January 1st to June 30th, 1916, permits were issued by the Federal Horticultural Board to cover the importation of 576 cars of Canadian potatoes. Of this number however, only eleven cars were actually shipped into the state from Canada, but we now have on hand permits for two thousand tons to be brought here from Canada after September 1st. During May, June and July, of season 1916, there were 260 cars potatoes shipped to Seattle from California by rail and boat.

THE INSPECTION OF IMPORTED POTATOES.

During April, May, June and July of the season 1916, the Seattle market received 343 cars of potatoes from outside the state as follows: 196 cars from California, 62 cars from British Columbia, 45

from Minnesota, 11 from Montana, 11 from North Dakota, 6 from Idaho, 5 from Michigan, 4 from Wisconsin, 2 from Illinois, and one from Florida.

The fear that the potato tuber moth might be introduced into the potato fields of the state has been our reason for careful inspection of all potatoes from California. The strict inspection of these shipments has naturally meant quite a little inconvenience and expense to the shippers at both ends of the line, and occasionally has meant that a few cars rejected by the inspector here had to be returned to California in which case the round trip haul practically consumed the value of the car. It was for this reason that during May, 1916, the Seattle commission men and potato brokers took up a collection among themselves of \$200.00 to pay the expense of inspector F. N. Rhodes to Los Angeles and Stockton in order that the potato shipments for this state might be inspected at shipping point rather than at destination. Mr. Rhodes went first to Los Angeles where the first shipments come from and later went to Stockton from where the largest amount of California potatoes are shipped to Washington points.

The method of procedure in inspecting these shipments was thorough, and where the inspector was unable to find one infected potato in the car he would then issue a certificate giving the car number, origin, number of sacks, consignee and destination, and stating "Apparently free from tuber moth." One copy of this certificate was given the shipper, one was sent to the Chief of the Horticultural Division, Olympia, Wash., and one to the inspector into whose district the shipment was made. All the shippers wanted the inspection and certificate, and in no case did they ship any of the rejected cars into Washington.

Mr. Rhodes passed 131 car loads which were shipped to Washington points as follows: 111 to Seattle, 14 to Tacoma, 4 to Spokane, 1 to Aberdeen and 1 to Everett. He rejected fifteen cars at the shipping point. The local inspector at Seattle on duty during Mr. Rhodes' absence condemned five cars which however were not inspected in California. On account of the arrival of home grown early potatoes on the market in quantity around August first, this date approximately marks the close of the shipping season for this product from California points.

THE COLORADO POTATO BEETLE.

Early in the month of July, 1916, Mr. W. S. McClain, of Sunnyside, Washington, discovered the presence of a few specimens of the old fashioned Colorado Potato Beetle, and notified Mr. F. E. DeSelle, inspector-at-large for that district, of this discovery. Immediately a survey was begun to determine the extent and distribution of the pest.

In addition to Mr. DeSellem and the chief of the Horticultural Division, four inspectors each having the use of a Ford, were assigned certain areas for close inspection. Sunnyside business men as well as farmers took a keen interest in the work and urgently recommended that the pest be exterminated if possible before further spread of the insects might make such action impracticable.

The result of the survey showed that fourteen patches were infested to a greater or less degree. It was then urged upon the growers that arsenical spraying be thoroughly applied so as to kill as many of the feeding larvae as possible and these sprayings were quite thoroughly done. On account of the season of the year at the time this discovery was made, it was impossible to find pupae that had crawled from the vines into the ground for pupation and some adults were daily appearing. Quite a number of egg clusters were found indicating that the further spread of the pest was taking place rapidly.

With the information that the pest was distributed over fourteen patches, and that absolute thoroughness in carrying out the methods of eradication was vitally essential to get results, it was decided during the forenoon of July 8th, to call a meeting of the interested potato growers for that evening. The president of one of the Sunnyside banks assisted in the calling of the meeting by prevailing upon the telephone company to ring a general call at noon. The meeting was held that evening at the farm home of Mr. Earl Harris, a wide awake potato grower of the district. The meeting brought out certain facts bearing on the future of potato growing in the Yakima Valley. With approximately 5,000 acres producing annually about 3,000 cars of this crop in the Yakima Valley, it took only a few minutes discussion to convince all present that to allow an unrestricted spread of the pest throughout the valley would mean an annual cost of \$15,000 to \$18,000 in control measures or greater loss if allowed to feed unmolested on the crops. It is another example of community interest in the control of pests and diseases and in this, as well as in the pear blight control work, the Sunnyside farmers have proved themselves to be able to see the need for community action in the control of these serious pests so likely to affect the value of the crops of the district.

It was this spirit of healthy cooperation and the desire to exterminate, if possible, the Colorado Potato Beetle from the Yakima Valley that made the vote unanimous for the organization of the Sunnyside Potato Protective Association. Mr. W. O. Crow was elected president and Earl Harris, secretary. The association has already accomplished much good for that locality and with the aid of our inspectors it is planned to later take up the study of educational phases of potato growing such as the selection and growing of seed potatoes, irrigation practices, harvesting, grading, etc., that go to make potato growing more profitable.

Following out the desire of the growers in so far as it is possible, an attempt towards the extermination of the pest has been carried out. Spraying of the infested patches was the first step taken in order to kill many of the larvae and the new larvae from egg clusters later as they are hatched. To supplement the spraying, the fourteen patches were carefully gone over and hand picked to destroy the adults as well as any larvae visible.

It must be admitted that the complete eradication of the pest after having a foot hold in fourteen patches could hardly be expected, however, if the work being done really accomplishes that, it will be a saving to the Yakima potato growers of thousands of dollars. On the other hand, if there happens to be a few beetles escape this season, certainly vigorous action early next season should be successful in practically cleaning up this pest which has already proved to be a ravenous feeder on potato plants in the Sunnyside district. The results of hand picking the beetles daily for four weeks is shown herewith and is quite encouraging in that the daily catch ranged from 358 beetles the first day to one adult the last day. The figures indicate that the result of the work done so far has been very successful in that it so nearly approaches our desire to see the pest eradicated in this district.

CATCH OF COLORADO POTATO BEETLES, SUNNYSIDE, WASH.

FOR WEEK ENDING JULY 22ND.

NAME	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
John Eubanks	268	88	88	85	79	85
John Brown		1				
Earl Harris	5	6	1	1	12	9
S. F. Smith.....	19	7	8	8	42	5
W. O. Crow.....						
S. Kostenbader			3	3	2	10
Paul Sapp	4	2			3	2
P. J. Lichty.....	1					
Ed. Brockway	2	2	1	1	2	7
A. O. Rader.....	43	16	7	7	19	23
H. D. Smith.....	11	1	8	8		5
J. H. Benning.....	3	4	3	3	3	4
G. H. Mowen.....		10	1	1	1	1
M. Padelford						
Clyde Atkinson	2		2		1	
Totals.....	358	137	122	117	164	151

Catch of Colorado Potato Beetles—Concluded.

FOR WEEK ENDING JULY 29TH.

NAME	Monday	Tuesday	Wednes- day	Thurs- day	Friday	Satur- day
J. Eubanks	120	50	30	19	3	10
John Brown						
Earl Harris	9	21	7	10		1
S. F. Smith.....	27	8	13	12	10	27
W. O. Crow.....		1				
S. Kostenbader	12	3	9	8	5	5
Paul Sapp	12	4	4	1	3	
P. J. Lichty.....				2		
Ed. Brockway	16	6	4			2
A. O. Rader.....	77	61	28	16	9	
H. D. Smith.....	7		1			
J. H. Benning.....	2					
G. H. Mowen.....	2	1				
Clyde Atkinson			2			
Totals.....	284	155	98	68	30	45

FOR PERIOD ENDING AUGUST 5TH.

NAME	Monday	Tuesday	Wednes- day	Thurs- day	Friday	Satur- day
John Eubank		2	1		2	
Earl Harris						
W. O. Crow.....						
S. F. Smith.....	12	15	11	4	1	3
Sol Kostenbader						
Ed. Brockway						
A. O. Rader.....	7			1		
G. H. Mowen						
H. D. Smith.....	2					
Paul Sapp	1					
J. H. Benning.....						
Clyde Atkinson						
Totals.....	22	17	12	5	3	3

FOR PERIOD ENDING AUGUST 12TH.

NAME	Monday	Tuesday	Wednes- day	Thurs- day	Friday	Satur- day
John Eubank						
Earl Harris						
S. F. Smith.....	5	1				1
W. O. Crow.....						
S. Kostenbader	1					
Paul Sapp						
P. J. Lichty						
Ed. Brockway						
A. O. Rader.....			2			
H. D. Smith.....	1		1			
J. H. Benning.....						
G. H. Mowen						
Henry Stalhut						
Clyde Atkinson						
Totals.....	7	1	3			1

INSECTICIDES AND FUNGICIDES.

Section 6 of the Horticultural law makes provision for a state insecticide and fungicide board, and it was made the duty of this board to analyze and report upon any horticultural insecticides and fungicides. The board now consists of Dr. Ira D. Cardiff, director of the experiment station; Dr. F. D. Heald, plant pathologist; Prof. Geo. A. Olson, state chemist; Dr. A. L. Melander, entomologist, secretary; T. O. Morrison, chairman.

Forty-seven samples of spray material were sent to the state chemist by members of the horticultural division. These were analyzed by Prof. Olson and the results of his analysis circularized among the horticultural inspectors who in turn gave out the information to interested growers.

Manufacturers of spray materials are generally trying to comply with the law in their offering for sale in the State of Washington any of their horticultural insecticides or fungicides. The fact that any of these materials, if adulterated or misbranded within the meaning of the law, are very likely to be found by state or federal officials has stimulated manufacturers to exercise care in this connection.

CONFERENCE OF HORTICULTURAL INSPECTORS.

A conference of the inspectors at large for the horticultural division was held at the State College April 10, 11 and 12. The object in holding the conference was for the purpose of getting better acquainted with the faculty members of the experiment station and to meet with them in their laboratories for discussion of pests and diseases injurious to horticulture. We are especially indebted to the professors for giving us almost their entire time during the three days conference and for the scientific assistance given to aid us in our field work.

The program for the conference was outlined and special problems were taken up in their order under the following general subjects:

Regulatory work.

Miscellaneous insects.

Ways in which our horticultural inspectors can cooperate with the experiment station men.

Sprays.

Miscellaneous fungi.

Potato troubles:

(Insect pests).

(Fungous diseases.)

(Seed selection.)

Codling moth.

San Jose scale.

GRADE AND PACK CONFERENCES.

Section 17 of the Horticultural Laws authorizes a public hearing annually with horticulturists in order that a full and impartial opportunity may be given all interested districts to be heard in the estab-

lishing of grading rules for apples for the ensuing year. Sections 16 and 17 are closely related in that they provide for a "Washington Standard Pack" for apples; provide for the defining and adoption of the grade requirements, and specify what constitutes proper branding of closed packages of the same.

In April, 1915, after the passage of the new horticultural law, the Assistant Commissioner in charge of the horticultural division met in conference with growers and shippers in Spokane at a regular meeting of the Growers' Council. As a result of the conference rules and regulations were adopted by the Assistant Commissioner and Acting Commissioner of Agriculture under authority of Section 17.

In order to adopt grading rules for the season of 1916 a conference was held in Spokane December 20, 1915. The following will show the nature of the announcement and the general rules governing the conference:

"The Commissioner of Agriculture is authorized and directed by Section 17 of the Horticultural Law to, in the month of December of each year, make, adopt, issue and publish general rules and regulations governing the grade and pack of apples, and establish and define grades for the ensuing calendar year. The Commissioner is authorized by law to advise and consult with fruit growers and officers of fruit growers' associations, and to provide for public hearing or convention so as to insure an impartial opportunity for all interested districts to be represented.

The "Washington Standard Pack" grading rules for apples adopted under authority of the horticultural law, were adopted in Spokane April 28, 1915, at a meeting of the Northwest Growers' Council.

The 20th of December, 1915, has been selected as the date for the next general meeting of apple growers and shippers to decide on rules for the season of 1916, and it is sincerely hoped that the wishes of the majority of the fruit growers may be had with reference to amendments to the rules now in effect. In order to get the wishes of the fruit growers themselves and thus have public sentiment back of the grading rules, we are asking that local or district meetings be held in advance of the final conference, and that these districts be represented at the final conference. The law specifies that representations shall be on a tonnage basis. As the figures for the 1915 apple shipments are incomplete at this date we are assuming that the 1914 apple shipments taken as a basis will be a fair basis of representation for all districts.

The following is the apportionment we are making as a basis of representation:

Chelan, Okanogan, Douglas and Grant.....	63 votes
Kittitas	1 vote
Yakima	52 votes
Benton and Franklin counties.....	2 votes
Spokane	5 votes
Columbia, Garfield and Walla Walla.....	3 votes
Stevens and Lincoln.....	2 votes
Skamania county	1 vote
Klickitat county	1 vote
Whitman county	1 vote

The Plan of Procedure.

1. Local or district meetings.
2. Election of chairman and secretary of meeting.
3. Designation of boundaries of district.
4. Approximate number of cars of apples represented by the district taking the 1914 crop as a basis.
5. Proposed amendments.
6. Adopted amendments to be submitted in writing.
7. Amendments to be signed by chairman and secretary of meeting and presented to the grading conference on December 20th, by delegates selected at the local meeting.

1. We ask that in the consideration of amendments to the apple grading rules that local or district meetings be open to all interested apple growers whether or not they be members of the organization, association or community organization by or through which the meeting has been called. I am asking that our inspectors-at-large superintend these meetings by naming the date, place, and checking up the amendments offered in order that there may be no confusion as to the delegates that will be acceptable at the Spokane meeting.

2. In calling the meeting together, in our opinion there should be a chairman and secretary elected.

3. The boundaries of the district represented by the meeting should be defined at least by names of localities within the district in order that representation within the districts may be as nearly in proportion to the apple tonnage as possible.

4. That the meeting vote to adopt or reject any amendments offered.

5. That the adopted amendments be in writing and attached to a copy of the printed grading rules so that there may be no mistake as to the meaning of the amendments.

6. In submitting amendments for consideration at the central meeting December 20th, proposed amendments should be submitted in writing by a delegate or delegates selected at the local meeting or, if it is the desire of the meeting, the written amendments may be submitted by registered mail.

7. We ask that the secretary and chairman sign the amendments that are offered by their district and make statement showing the number of growers present at the local or district meeting.

On account of limited amount of space allotted this division the apple grading rules as adopted for the seasons of 1915 and 1916 are necessarily omitted from this report.

NURSERIES AND NURSERY STOCK.

Of the number of nurseries licensed for the period July 1st, 1915, to July 1, 1916, sixty-one failed to renew their licenses. Eighty-eight nursery licenses are in effect for the period July 1st, 1916, to July 1st, 1917.

Nurseries have been inspected whenever possible during the growing season to locate any infection that may have been present on the

stock above the ground line. In so far as is practical, the final inspection is done at "digging time" when it is most convenient to examine for root diseases, and if it is not done then the inspection is done at point of destination.

The inspection of the nurseries and nursery shipments in this state is no small task when carefully done, but does not, however, occupy as much time as some of the less important details of our work. The inspection of nursery stock from foreign countries is done by this division under the general supervision of the Federal Horticultural Board.

This report includes in tabulated form the nursery deliveries and foreign nursery stock imported and inspected by this division.

FRUIT CROP ESTIMATES.

During the past four seasons this division has issued from two to four fruit crop reports during the growing season and there has been considerable interest shown in reports of this kind. During the present season (1916) we have issued two reports, the first July 3rd, and the second September 1st, in co-operation with the Fruit Growers Agency.

The Fruit Growers Agency has been receiving the active support of the office of markets and rural organization of the U. S. Department of Agriculture and in the compilation of the fruit crop estimates we have tried to furnish some assistance to this marketing plan. The reports have been mimeographed in each case and copies mailed to growers and shippers on our mailing lists and to a great many parties outside the state at their request. In making the estimates and collecting the data the inspectors at large were instructed to look over their horticultural districts preparatory to making their estimates and to call on shippers and shippers' organizations accustomed to making crop estimates in order that this final estimate might represent a fair average. In this connection I must say that our inspectors in the commercial apple districts by their practical handling of this matter and other details of their work have my personal admiration and I am sure that of many of their growers.

I believe that our crop estimate in being used as an invoice of the commercial apple crop of the state will be of considerable value to the different marketing agencies.

THE LAW OF COMMISSION MERCHANTS.

Our attempt to enforce the law of commission merchants was discontinued early in the season 1916 at the time the law was declared by the Supreme Court to be null and void.

That the law as drawn is hardly practical for present conditions can be readily seen by considering the following important points:

1. Definition of commission merchant is faulty in that fifty-one per cent of a firm's business must be on a commission basis to come

within the definition of commission merchant. No provision is made for cooperative organizations, and yet as the law is drawn these organizations come within the meaning of commission merchant.

2. Requiring payment within ten days for certain firms in special markets and under favorable conditions would be possible but would be practically impossible for large shippers and organizations to comply with without being able to take into consideration the distance to market, and whether or not the shipment consisted of all or a portion of a variety pool.

3. A special appropriation would be necessary to carry out the provisions of such a law. So far we have had no appropriation for this purpose.

It may be of some interest in this connection that the following opinions concerning the law of commission merchants were written by the State Supreme Court.

Washington Decisions.

Ferguson-Hendrix Co. v. Fidelity & Deposit Co.....Vol. 37, No. 7, Page 392
State v. Bowen & Co.....Vol. 44, No. 1, Page 10
State v. J. B. Powles & Co.Vol. 47, No. 9,

Since the law of commission merchants has been declared null and void it would hardly be necessary to give this explanation were it not for the fact that we often hear of some one advocating a law of commission merchants. We know of a number of instances where a good workable law could have been the means of bringing an untrustworthy commission merchant to do that which the dependable commission merchant would do.

To any legislators who contemplate proposing legislation for the regulation of this class of trade I would urge that it first be submitted to the Office of Markets and Rural Organizations of the U. S. Department of Agriculture, Washington, D. C.

The following are some of the prosecutions brought under the Horticultural Law:

NAME AND ADDRESS OF PARTY PROSECUTED	Base of Complaint	Verdict	Date of Verdict
O. M. McKinney, Walla Walla, Wash.....	Offering for sale infected fruit.....	\$25 and costs.....	Justice..... (W. W.) 7-19-15
Elmer Rector, Freewater, Oregon.....	Importing and selling infected fruit.....	\$25 and costs.....	Justice..... (W. W.) 7-17-15
J. T. Walker, Freewater, Oregon.....	Importing and selling infected fruit.....	\$25 and costs.....	Justice..... (Dayton) 9-27-15
John Pulliam, Dayton, Wash.....	Selling infected fruit.....	\$25 and costs.....	Justice..... (Waltaburg) 9-10-15
B. Frank Smith, Pomeroy, Wash.....	Selling infected fruit.....	1 by county	.....
F. L. Phelps, Freewater, Oregon.....	Importing and selling infected fruit.....	Not apprehended	.....
J. P. Pittman, Freewater, Oregon.....	Importing and selling infected fruit.....	Not apprehended	.....
Geo. Tison, Freewater, Oregon.....	Importing and selling infected fruit.....	Not apprehended	.....
D. Elgie, Freewater, Oregon.....	Importing and selling infected fruit.....	Prosecution dropped by the county attorney.	.....
O. E. Mabry, Madison.....	Conducting nursery business without first obtaining a license.	\$25 and costs.....	Justice..... Judge Orinker's Court 4-25-16
W. D. Miller, Kettle Falls.....	Interfering with a horticultural inspector in the discharge of his duty.	GUILTY	Superior..... Nov. 1915
Pacific Fruit & Produce Co., No. Yakima. Carried over to.....	Shipping infected fruit.....	\$100 and costs, totalling \$127.75.	Justice..... Superior..... Justice..... 4-9-16 Hearing 11-30-15 (under advertisement) Judgment 12-14-15
J. M. Perry & Co.....	Shipping infected fruit.....	GUILTY (\$95.06)	Justice..... Hearing 6-10-15 Judgment 6-21-15
Mr. Jas. Day.....	Refusal to disinfect.....	GUILTY (\$35.30) (Appealed to superior court.)	Justice.....

ORCHARD ACREAGE OF WASHINGTON.

There have been many inquiries coming to this office in regard to the fruit acreage of the different districts of the state, and as it is of particular interest to those engaged in the marketing of the fruit crop we are including herewith data covering this matter in a general way. The data for North Central Washington was collected by the league-state inspectors and compiled by the Wenatchee North Central Washington Growers' League.

Only the totals are here shown from this report. The figures for the remaining districts of the state were revised by the inspectors at large for their respective districts.

In considering the fruit tree acreage of the state it will probably be of most value to shippers and shippers' organizations to have this data for the commercial districts grouped separately from that of the counties having quite a large number of fruit trees, but which are either planted as home orchards or are so isolated in small lots as to be of very little importance commercially.

GENERAL.

In writing this general report of the work of the horticultural division the assistant commissioner of agriculture, in charge of this division, deeply regrets that lack of space prevents the printing of the very excellent reports of the ten inspectors-at-large. The report of each inspector and the work he has done in his respective district since the issuance of our last report speaks for itself the true character of his work and the services he has performed. As head of this division it is with a great deal of pride and satisfaction that I have attempted to explain the lines of work and the results we have accomplished together. The conscientious endeavor on the part of the field inspectors to make their efforts of real service to the fruit and vegetable growers has been a great source of satisfaction to me. I am glad indeed to acknowledge the valuable work of these men.

Among some of the things that would have been of great value in this report are several field problems that men of this division have been working on. Mr. Luke Powell, inspector-at-large, Prosser, Washington, carried out a series of demonstrations for the control of grape and apple mildew, tests in pollination of cherries, and tests in pear stocks more or less resistant to blight.

Mr. O. T. Clawson, inspector-at-large, Wenatchee, Washington, has made a survey of cover crop conditions in more than fourteen hundred orchards of North Central Washington. He has some valuable data on the subject of alfalfa in the orchard which would make an excellent bulletin. Mr. Clawson and his assistant, Mr. A. L. King, have recorded some interesting data concerning the life history of the codling moth.

Mr. F. E. De Sellem, inspector-at-large, North Yakima, has carefully carried out some potato demonstrations with reference to disease and the growing of seed potatoes which would make material for a

useful bulletin. Mr. De Sellem has also a codling moth demonstration tract of eighteen acres divided into fifty-two plots that will bring out some very interesting comparisons of materials used and in the number of applications. Blue prints have been made of this demonstration and all details are being carefully recorded.

Mr. C. W. Gilbreath, inspector-at-large, Walla Walla, carried out successful demonstrations in the control of apple mildew and its effect on the setting of fruit buds. He has also made some interesting observations and notes on thinning and on the use of insecticides for the control of San Jose Scale. Mr. H. W. Samson, inspector-at-large, Spokane, Wash., has data on certain phases of *Bacillus amylovorus* and apple scab that would also make interesting reading.

There are yet other lines of work in which the inspectors of this division have been interested in and in many instances have worked long after the regular day's work was done in order to complete the task before them.

We are sure that the horticultural division has given the best service that was within us and we have conscientiously tried to be of assistance to the horticultural industry of the state.

Respectfully submitted,

T. O. MORRISON,

*Assistant Commissioner of Agriculture,
In Charge, Division of Horticulture.*

BEARING FRUIT TREES.

COUNTIES	Apples	Pears	Peaches	Apricots	Plums and Prunes	Cherries
Chelan } Douglas } Okanogan } Grant }	*948,317	*44,709	*68,664	*20,366	*7,748	*20,694
Adams	6,000	2,300	1,500	300	600	1,500
Asotin	*16,000	*4,800	*33,000	*2,200	*7,500	*35,000
Benton	*456,060	*82,840	*51,420	*14,600	*14,900	*29,700
Clallam	32,000	1,000	.....	.....	1,600	*1,500
Clarke	48,000	18,000	6,000	.....	*590,780	4,000
Columbia	*44,000	.....	*6,000	.....	.....	*5,000
Cowlitz	17,000	3,000	.....	.....	3,750	2,000
Ferry	*14,000	1,500	.....	.....	1,000	1,800
Franklin	*70,000	*8,000	*10,000	1,000	1,000	*1,000
Garfield	*4,000	*1,920	*15,000	.....	.....	.....
Island	36,000	.....	.....	.....	.....	.....
Jefferson	16,000	1,200	.....	.....	3,500	600
King	112,535	37,200	10,575	.....	27,500	38,625
Kitsap	8,000	3,000	.....	.....	.....	4,000
Kittitas	*128,000	.....	.....	.....	.....	.....
Klickitat	*425,680	*6,000	*18,000	*25,000	*1,500	*1,900
Lewis	46,000	.....	.....	.....	3,200	11,500
Lincoln	*65,000	*16,800	*34,000	.....	*6,000	*3,500
Mason	11,000	2,400	500	.....	2,400	2,300
Pacific	4,000	.....	.....	.....	150	.....
Pend Oreille	*9,000	.....	.....	.....	2,700	900
Pierce	64,651	18,299	.....	.....	.....	*14,165
San Juan	42,000	*5,400	.....	.....	6,800	2,400
Skagit	48,000	11,500	.....	.....	6,500	7,500
Skamania	*72,000	.....	1,000	.....	*9,500	*1,500
Snohomish	68,000	12,000	.....	.....	5,500	9,000
Spokane	*1,066,700	.....	.....	.....	.....	.....
Stevens	*190,000	*15,000	*12,000	.....	*11,700	*6,500
Thurston	46,000	9,000	600	.....	34,000	8,600
Wahkiakum	4,850	3,700	2,700	.....	5,500	1,250
Walla Walla	*184,000	.....	*4,800	.....	*25,000	.....
Whatcom	29,600	3,700	.....	.....	5,600	*8,300
Whitman	*148,000	*8,100	*88,000	*5,700	*31,000	*9,800
Yakima	*1,198,000	*151,008	*234,480	.....	*34,750	*6,750
Totals.....	5,608,593	397,320	593,289	69,166	821,078	241,284

* Grown in commercial quantities.

FRUIT TREES FIVE YEARS AND YOUNGER.

COUNTIES	Apples	Pears	Peaches	Apricots	Plums and Prunes	Cherries
Chelan } Douglas } Okanogan } Grant }	*1,733,245	*83,814	*39,718	*20,335	*3,849	*7,309
Adams	7,000	2,400				
Asotin						
Benton	*3,000					
Clallam	1,000	1,000			200	*250
Clarke	7,000	2,000	1,000		*131,500	1,000
Columbia	*35,000					*7,000
Cowlitz	4,000	2,000			2,800	500
Ferry	*14,000					
Franklin						
Garfield		*2,880			*5,000	
Island	18,000					
Jefferson	2,000	300				700
King	29,500	24,500	8,000		9,000	22,000
Kitsap	2,000	3,000				3,000
Kittitas	*32,000					
Klickitat	*89,320	*1,700	*2,000	*5,800		100
Lewis	8,000					
Lincoln	*21,000	*1,320				
Mason						
Pacific	3,400					
Pend Oreille	*3,600	850	300		2,700	
Pierce	5,000	1,000				*6,000
San Juan	8,000	1,600				1,100
Shagit	12,000	7,000				
Skamania	*11,700		500		*4,000	500
Snohomish	18,000	8,500				600
Spokane	*533,300					
Stevens	*140,000	*8,000				
Thurston	3,500	12,000				
Wahkiakum	1,700	1,250	1,200		1,500	800
Walla Walla					*12,500	
Whatecom	11,000	4,200				*3,800
Whitman	*5,800	*1,100		*800	*1,750	*4,400
Yakima	*1,197,520					
Totals.....	3,952,585	170,414	52,718	26,935	174,298	59,059

* Grown in commercial quantities.

**WENATCHEE-NORTH CENTRAL WASHINGTON DISTRICT.
COMPRISING COUNTIES OF CHELAN, DOUGLAS, OKANOGAN AND GRANT.**

DISTRICT AND ACREAGE	Age of Trees	Apples	Orab Apples	Quinces	Pears	Apricots	Plums	Cherries	Peaches
Wenatchee 4,630.47 acres	1-3 years.....	44,408	744	3	6,020	1,923	750	187	235
	4-5 years.....	55,169	292	9	3,672	1,755	353	298	976
	6-7 years.....	62,421	191	8	2,854	3,187	1,303	1,611	4,101
	8-9 years.....	48,990	107	13	3,146	2,801	887	2,467	5,320
	10 and older...	90,031	299	146	4,889	2,075	2,183	5,794	19,781
Olds Station 1,551.52 acres	1-3 years.....	10,848	75	.....	1,608	333	12	79	4
	4-5 years.....	20,179	14	.....	543	107	.....	127	85
	6-7 years.....	23,532	10	.....	1,184	291	41	211	1,585
	8-9 years.....	9,588	45	1	751	841	45	207	900
	10 and older...	21,817	26	6	1,131	344	131	1,018	1,984
Monitor 1,774.92 acres	1-3 years.....	10,780	24	4	2,554	228	152	3	6
	4-5 years.....	25,293	.....	.....	1,309	108	27	13	5
	6-7 years.....	30,263	12	.....	1,858	648	55	68	467
	8-9 years.....	19,661	33	.....	720	611	225	317	1,832
	10 and older...	9,405	3	3	440	141	84	156	350
Cashmere 3,490.42 acres	1-3 years.....	24,210	12	1	4,979	4	1	148	90
	4-5 years.....	67,685	7	.....	3,076	19	10	90	29
	6-7 years.....	70,892	4	.....	3,965	50	39	299	269
	8-9 years.....	48,209	42	3	2,647	71	60	843	601
	10 and older...	43,674	41	11	1,399	99	149	1,171	413
Dryden 1,389.08 acres	1-3 years.....	40,679	2	1	3,817	78	4	21	13
	4-5 years.....	29,485	8	.....	1,692	12	41	113	100
	6-7 years.....	17,697	19	.....	1,961	31	70	161	387
	8-9 years.....	13,287	26	.....	424	41	51	177	177
	10 and older...	7,993	11	.....	164	8	36	154	40
Peshastin 1,638.87 acres	1-3 years.....	38,827	26	6	7,211	25	39	196	55
	4-5 years.....	41,265	6	.....	2,445	24	57	306	146
	6-7 years.....	23,230	1	.....	1,613	12	47	110	184
	8-9 years.....	16,875	30	.....	174	6	32	134	166
	10 and older...	7,805	23	.....	138	14	32	190	89

Wenatchee-North Central Washington District—Continued.
COMPRISING COUNTIES OF CHELAN, DOUGLAS, OKANOGAN AND GRANT.

DISTRICT AND ACREAGE		Age of Trees	Apples	Crab Apples	Quinces	Pears	Apricots	Plums	Cherries	Peaches
Leavenworth	721.00 acres	1-3 years.....	12,224	.....	.....	1,085	.....	2	6	17
		4-5 years.....	13,734	8	.....	816	2	12	44	14
		6-7 years.....	17,120	.....	6	456	.....	8	29	8
		8-9 years.....	6,037	7	8	13	.....	7	12	13
		10 and older...	465	38	.....	88	4	55	96	4
Malaga	1,002.70 acres	1-3 years.....	18,863	5	13	4,353	733	99	141	77
		4-5 years.....	39,647	16	1	2,253	1,202	9	84	453
		6-7 years.....	15,205	9	3	2,053	1,290	60	359	2,403
		8-9 years.....	10,106	55	1	637	939	35	101	2,693
		10 and older...	16,583	74	.....	1,629	953	315	577	1,435
East Wenatchee	3,402.40 acres	1-3 years.....	36,773	25	1	3,152	2,390	250	271	92
		4-5 years.....	106,933	27	4	2,332	2,670	68	491	4,119
		6-7 years.....	60,952	6	.....	2,333	2,616	220	1,407	4,166
		8-9 years.....	3,053	.....	.....	113	237	34	15	1,100
		10 and older...	1	.....	.....	.....	.....	.....	.....	.....
Entiat, Orondo and Wagnersburg	1,710.25 acres	1-3 years.....	20,555	60	.....	2,226	443	14	21	.....
		4-5 years.....	37,598	23	1	1,762	19	16	226	1,354
		6-7 years.....	22,010	9	.....	1,099	151	5	85	2,109
		8-9 years.....	15,509	63	1	1,772	243	32	405	.....
		10 and older...	6,883	147	6	822	298	243	99	991
Winesap	170.35 acres	1-3 years.....	195	5	.....	.....	50	.....	.....	.....
		4-5 years.....	4,010	.....	.....	1,045	.....	.....	.....	.....
		6-7 years.....	.....	.....	.....	.....	.....	.....	.....	.....
		8-9 years.....	2,508	.....	.....	55	450	.....	.....	675
		10 and older...	2,626	.....	.....	1	30	.....	2	73
Chelan, Chelan Falls and Lakeside	211.23 acres	1-3 years.....	52,221	7	.....	3,302	390	8	47	25
		4-5 years.....	36,246	.....	.....	111	497	32	14	5
		6-7 years.....	31,641	60	.....	376	370	49	64	890
		8-9 years.....	13,603	.....	.....	14	33	5	49	216
		10 and older...	13,799	33	.....	124	6	126	373	32

Wenatchee-North Central Washington District—Continued.

COMPRISING COUNTIES OF CHELAN, DOUGLAS, OKANOGAN AND GRANT.

DISTRICT AND ACREAGE		Age of Trees	Apples	Crab Apples	Quinces	Pears	Apricots	Plums	Cherries	Peaches
Pateros, Bridgeport and Gordon	2,171.54 acres	1-3 years.....	69,619	.....	.....	1,120	124	28	99	1,156
		4-5 years.....	71,360	.....	.....	1,674	260	32	9	978
		6-7 years.....	8,850	.....	.....	423	13	3	87	865
		8-9 years.....	4,087	.....	.....	137	.....	8	302	308
		10 and older...	2,808	23	.....	924	34	185	16	73
Brewster	1,119.29 acres	1-3 years.....	13,076	.....	.....	446	815	.....	20	4
		4-5 years.....	43,594	.....	.....	222	12	.....	166	277
		6-7 years.....	16,229	.....	.....	133	10	109	187	1822
		8-9 years.....	7,482	9	.....	110	29	29	213	811
		10 and older...	.....	.....	.....	.....	.....	.....	.....	.....
Malott and Okanogan	2,211.50 acres	1-3 years.....	21,946	30	.....	901	236	48	69	398
		4-5 years.....	100,692	17	20	1,064	1,719	36	297	1,196
		6-7 years.....	19,135	3	1	930	649	63	367	1,507
		8-9 years.....	1,876	.....	.....	61	39	5	11	75
		10 and older...	1,800	13	.....	240	17	81	79	208
Omak	3,245 acres	1-3 years.....	47,151	77	3	928	199	34	100	3,069
		4-5 years.....	116,761	21	11	1,903	1,343	155	991	4,735
		6-7 years.....	32,750	12	.....	1,034	1,159	51	404	2,331
		8-9 years.....	269	3	.....	.....	.....	.....	.....	.....
		10 and older...	490	.....	.....	15	.....	460	.....	.....
Riverside and north	973.48 acres	1-3 years.....	22,778	20	.....	1,214	4	.....	.....	222
		4-5 years.....	35,649	.....	2	341	257	172	105	1,769
		6-7 years.....	613	.....	.....	18	.....	.....	46	607
		8-9 years.....	901	.....	.....	35	.....	.....	100	.....
		10 and older...	80	6	.....	.....	5	6	6	12
Methow Valley	1,582.00 acres	1-3 years.....	51,379	.....	.....	3,796	27	5	.....	70
		4-5 years.....	26,163	.....	.....	132	.....	.....	192	.....
		6-7 years.....	10,111	.....	4	4	3	4	403	11
		8-9 years.....	1,433	.....	.....	170	3	15	41	15
		10 and older...	1,369	.....	.....	.....	75	.....	.....	12

Wenatchee-North Central Washington District—Continued.
COMPRISING COUNTIES OF CHELAN, DOUGLAS, OKANOGAN AND GRANT.

COMPREISING COUNTIES OF CHELAN, DOUGLAS, OKANOGAN AND GRANT.										
DISTRICT AND AOREAGE		Age of Trees	Apples	Orab Apples	Quinces	Pears	Apricots	Plums	Ocherries	Peaches
Moses Coulee	745.00 acres	1-3 years.....	510	.....	.....	.....	540	.....	.....	.....
		4-5 years.....	18,620	.....	.....	.....	505	.....	.....	12,178
		6-7 years.....	19,809	.....	94	.....	20	.....	.....	8,915
		8-9 years.....	2,705	.....	.....	.....	200	.....	.....	88
		10 and older...	537	41	.....	61	.....	130	32	.....
Grant County	5,170.74 acres	1-3 years.....	176,243	250	.....	2,644	684	343	1,146	1,085
		4-5 years.....	128,010	50	.....	5,436	538	589	1,240	4,641
		6-7 years.....	11,531	5	.....	18	278	5	143	.....
		8-9 years.....	.....	.....	.....	.....	.....	.....	.....	.....
		10 and older...	.....	.....	.....	.....	.....	.....	.....	.....
Totals.....		.....	2,678,172	3,380	200	128,523	40,701	11,086	28,003	108,882

Spokane County.

District		
East Farms	92,000	Apples
West Farms	24,000	"
Pasadena Park	16,000	"
Opportunity	192,000	"
Pierce	12,000	"
Vera	120,000	"
Greenacres	58,000	"
Trentwood	24,000	"
Otis	176,000	"
Arcadia	560,000	"
Foothills	18,000	"
Pleasant Prairie	16,000	"
Green Bluffs	32,000	"
Hanauer Graves	208,000	"
Miscellaneous	72,000	"

Two thirds of the apple trees in Spokane County classed as five years and older.

Kittitas County.

Apples, 5 years and younger.....	400	Acres
Apples, 6 years and older.....	1,600	"
Mixed and family orchards.....	1,625	"
	3,625	"

Yakima County.

Apples, 5 years and younger.....	14,975	Acres
Apples, 6 years and older.....	24,969	"
Peaches and apricots.....	1,954	"
Pears	1,573	"
Prunes and plums	278	"
Cherries	75	"
Family orchards	1,788	"
	45,621	"

PERCENTAGE OF VARIOUS VARIETIES, 1916.

Yakima County.

Variety	Percent	Acreage
Winesap	15.52	6,201
Jonathan	14.81	5,916
Ben Davis	12.77	5,103
Spitz	6.64	2,654
Mo. Pippin	6.45	2,578
Yellow Newtown	5.92	2,366
Rome Beauty	5.51	2,203
Gano	3.4	1,339
Black Twig	2.69	1,075
Stamen Winesap	2.48	991
Grimes Golden	2.46	986
Ark. Black	2.24	896
W. W. Pearmain	2.06	824
Red Cheek Pippin.....	1.56	626
York Imperial	1.34	537
Delicious	1.47	587
Wagener .....	.27	107
Odd varieties	12.41	4,954
	100	39,944

FRESH FRUIT SHIPMENTS—1915.
COMMERCIAL PRODUCTION OF FRUITS AS SHOWN BY CARLOAD AND LESS THAN CARLOAD SHIPMENTS. FRUIT MANUFACTURED INTO BY-PRODUCTS AS SHOWN ELSEWHERE IN THIS REPORT.

COUNTIES	Apples	Pears	Peaches	Grapes	Plums and Prunes	Apricots	Cherries	Water-melons	Cantaloupes	Tomatoes	Strawberries	Other Berries	Mixed Fruit
Asotin	6 cars	3 cars	61 cars	.....	11 cars	2 cars	29 cars	3 cars	3 cars	24 cars	2 cars	1 car	.....
Benton	101 cars	58 cars	265 cars	19 cars	9 cars	5 cars	10 cars	4 cars	25 cars	5 cars	52 cars	4 cars	.....
Chelan .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Douglas	5,400 cars	350 cars	175 cars	.....	80 cars	155 cars	80 cars	.....	.....	.....	.....	.....	.....
Okanogan .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grant .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Columbia	31 cars	.....	5 cars	.....	2 cars	.....	2 cars	.....	.....	.....	.....	.....	.....
Franklin	6 cars	.....	6 cars	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Garfield	11 cars	8 cars	54 cars	.....	22 cars	2 cars	12 cars	2 cars	1 car	1 car	2 cars	.....	.....
Kittitas	60 cars	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Klickitat	48 cars	5 cars	4 cars	2 cars	.....	2 cars	1 car	3 cars	.....	26 cars	56 cars	.....	.....
Lewis .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8 cars	.....	.....
Lincoln	10 cars	15 cars	10 cars	.....	.....	.....	3 cars	.....	.....	.....	.....	.....	.....
Spokane	364 cars	7 cars	.....	.....	52 cars	.....	9 cars	.....	.....	.....	57 cars	.....	32 cars
Stevens	45 cars	.....	.....	.....	.....	.....	2 cars	.....	.....	.....	.....	.....	12 cars
Thurston	8 cars	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Walla Walla	103 cars	8 cars	11 cars	2 cars	186 cars	.....	37 cars	2 cars	5 cars	3 cars	.....	4 cars	14 cars
Yakima	3,300 cars	943 cars	1,500 cars	40 cars	150 cars	10 cars	130 cars	150 cars	300 cars	25 cars	15 cars	4 cars	700 cars
Clarke	16,500 bxs.	12,350 bxs.	1,600 bxs.	2,300 baskets	.....	.....	1,500 bxs.	.....	500 crates	2,700 bxs.	16,300 crates	2,000 crates	.....
Cowlitz	12,000 bxs.	2,700 bxs.	.....	.....	.....	.....	240 bxs.	.....	.....	.....	1,800 crates	1,500 crates	.....
King .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20,111 crates	.....	.....
Kitsap	5,000 bxs.	.....	.....	.....	.....	.....	12,000 bxs.	.....	.....	3,000 bxs.	20,000 crates	.....	.....
Mason .....	.....	.....	.....	3,000 baskets	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pacific	1,800 barrels of cranberries	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pierce	2,225 bxs.	.....	.....	.....	400 crates	.....	790 bxs.	.....	.....	.....	.....	.....	.....
Skamania	1,250 bxs.	300 bxs.	.....	.....	.....	.....	250 bxs.	.....	.....	450 bxs.	12,870 crates	340,687 crates	.....
Snohomish .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,000 crates	.....	.....
Whatcom .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10,000	.....	.....
Totals.....	9,551 cars	1,416 cars	2,072 cars	56 cars	523 cars	176 cars	321 cars	164 cars	336 cars	90 cars	345 cars	586 cars	758 cars

EXPORTS OF FRUITS BY COUNTIES.

SHIPPED FROM COUNTIES AS LISTED BELOW, SEASON 1914.

(The figures below give the number of standard size packages.)

NOTE: Pacific county exported 4,000 barrels cranberries and Clarke county exported 2,000,000 pounds dried prunes.

COUNTIES	Apples	Pears	Peaches	Plums and Prunes	Apricots	Cherries	Water-melons (pounds)	Cantaloupes	Grapes	Toma-toes	Straw-berries	Other berries	Mixed Fruit
Asotin	7,580	5,040	19,580	14,000	8,820	25,200				2,200			
Cars	12.0	8.0	19.5	14.0	8.8	21.0				2.0			
Benton	84,167	83,749	211,615	5,943	2,576	5,670	882,060	48,666	34,212	12,575	41,807	3,219	
Cars	133.6	53.5	211.6	5.9	2.6	4.7	12.7	189.0	28.3	11.5	65.5	5.1	
Chelan	8,340,666	157,988	272,683	89,723	103,145	257,309							
Cars	5,302.6	250.5	272.6	39.7	103.1	214.4							
Clarke	12,000	3,000											
Cars	19.1	4.8											
Columbia	18,900		3,150			1,260			3,500	3,000	5,000	7,000	
Cars	30.0		3.2			1.0			2.6	2.7	7.9	11.1	
Cowlitz	1,500	550				300						750	
Cars	2.3	0.9				0.3						1.2	
Douglas	22,618	847	408	1,020	363	168							
Cars	35.9	1.3	0.4	1.0	0.4	0.1							
Franklin	2,500		3,600				2,000	500	1,000		1,500		
Cars	3.9		3.6				0.1	1.0	0.8		2.4		
Garfield	4,417	3,780	7,580	4,000	630	3,780	90,000		2,400	600		750	
Cars	7.1	6.0	7.6	4.0	0.6	3.2	8.0		1.8	0.6		1.2	
Grant	13,493	519	14,855	2,760	400								
Cars	21.4	0.8	14.3	2.7	0.4								
Kittitas	46,620	445	870			35	3,200	29			18	112	
Cars	74.0	0.7	0.4			0.08	0.1	0.1			0.1	0.2	
Klickitat	35,000	500	5,500	15,000	2,000	1,500	72,000		3,000	5,500	32,000	500	
Cars	55.5	0.8	5.5	15.0	2.0	1.8	2.4		2.8	5.0	50.8	0.8	
Lewis										1,100		2,250	
Cars										1.0		1.6	
Lincoln	11,250	9,450	15,750	6,000		1,260			6,000				
Cars	17.8	15.0	15.7	6.0		1.0			4.6				
Mason									13,000				
Cars									10.0				

EXPORT OF VEGETABLES BY COUNTIES IN STATE OF WASHINGTON.

SHIPPED FROM COUNTIES AS LISTED BELOW, SEASON 1914.

(The figures below give the number of standard size packages.)

COUNTIES	Potatoes	Onions	Egg Plant	Cabbage	Cucum- bers	Rhubarb	Carrots	Corn	Squash (pounds)	Mixed Vegetables	Aspara- gus	Celery
Benton	5,364	151	5,400	1	2,300	200	255	1,523	30,000	20	6,500	1,200
Cars	21.4	0.1	10.8		4.6	0.3	1.0	6.0	1.0	0.1	10.2	4.0
Clarke	46,000	8,000	1,000	1,200	1,000	120				200	2,520	1,000
Cars	184.0	31.0	2.0	6.0	2.0	0.2				0.4	4.0	3.3
Columbia	2,500						500		30,000			
Cars	10.0						2.0		1.0			
Cowlitz	55,000									800		
Cars	220.0									1.3		
Kittitas	30,000						500	1,000			1,260	
Cars	120.0						2.0	4.0			2.0	
Klickitat	4,000						500	500			1,260	
Cars	16.0						2.0	2.0			2.0	
Pierce	16,200			8,400	3,000	22,200				8,400		
Cars	108.0			42.0	6.0	87.0				14.0		
Skamania	4,400	900						500				
Cars	17.6	3.6						2.0				
Spokane	40,500	250		1,000			250			61,800		600
Cars	162.0	1.0		5.0			1.0			108.0		2.0
Wahkiakum	1,600			400						1,000		
Cars	6.4			2.0						1.3		
Walla Walla	9,250	117,250	1,500	10,600	2,000	9,000	1,000	1,500		70,200		2,400
Cars	37.0	469.0	3.0	53.0	4.0	15.0	4.0	6.0		117.0		8.0
Yakima	426,000	260			4,000		1,000	2,000			5,040	600
Cars	1,704.0	1.0			8.0		4.0	8.0			8.0	2.0
Totals.....	640,814	126,801	7,900	21,601	12,300	31,520	4,005	7,023	60,000	142,420	16,580	5,800
Cars	2,600.0	504.2	15.8	108.0	24.6	52.5	16.0	28.0	2.0	235.7	26.2	19.3

IMPORTATION OF FRUIT INTO WASHINGTON.
FROM ALL POINTS OUTSIDE OF STATE DURING SEASON OF 1914.
(Figures indicate number of standard size packages.)

COUNTIES	Apples	Pears	Peaches	Plums and Prunes	Apri- cots	Cher- ries	Oranges	Lemons	Grapes	Bananas	Canta- loupes	Water- melons	Berries	Toma- toes	Grape Fruit	Mixed Fruit
Asotin .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(pounds)	.....	.....	.....	2,400
Clarke	500	.....	.....	100	.....	50	1,000	500	.....	1,000	400	15,000	1,250	300	.....	.....
Columbia .....	.....	.....	.....	.....	.....	.....	750	250	.....	350	.....	.....	.....	.....	.....	1,200
Cowlitz .....	.....	.....	.....	.....	100	.....	800	250	.....	400	600	10,000	100	.....	.....	.....
Garfield .....	.....	.....	.....	.....	.....	.....	400	250	.....	250	.....	.....	.....	.....	.....	.....
Grays Harbor	3,150	1,890	2,200	.....	300	150	5,000	2,500	6,500	7,000	1,750	300,000	.....	.....	.....	200
Kling	15,635	4,706	52,479	10,392	5,869	7,477	218,766	38,131	140,005	130,325	60,826	19,500	88,313	112,632	25,013	.....
Klickitat .....	.....	.....	.....	.....	.....	.....	1,200	700	.....	1,500	.....	.....	.....	.....	.....	200
Lewis	100	150	1,260	250	435	561	8,000	2,500	5,200	5,950	1,400	480,000	600	5,500	.....	.....
Pacific	630	135	508	130	118	85	3,229	510	1,775	2,122	508	60,000	1,218	1,624	.....	.....
Pierce	2,520	680	4,000	2,000	2,000	4,800	70,000	9,500	49,200	46,550	15,050	1,284 000	15,120	8,800	.....	15,000
Skamania .....	.....	.....	.....	.....	.....	.....	200	75	.....	150	15	.....	.....	.....	.....	20
Spokane	1,260	.....	1,000	1,000	208	8,400	67,000	22,000	2,600	55,300	9,450	870,000	28,980	25,300	7,000	33,600
Thurston	30	.....	600	.....	.....	.....	700	150	140	.....	.....	.....	200	.....	100	.....
Wahkiakum	500	100	.....	150	50	75	125	50	125	100	200	12,600	1,050	400	.....	50
Walla Walla .....	.....	.....	2,520	.....	.....	.....	5,000	2,500	1,300	1,750	.....	.....	1,260	.....	.....	1,860
Yakima .....	.....	.....	.....	.....	.....	.....	6,000	1,500	.....	6,000	350	.....	160	.....	.....	.....
Totals.....	24,325	7,611	64,567	14,022	9,080	16,598	386,170	81,366	207,896	258,747	90,549	3,031,100	133,251	154,606	32,113	54,580

NOTE: The following fruits were imported into King county during the year ending January 1, 1915: Quinces, 405; pineapple, 934; pomegranates, 413; casabas, 2,340; tangerines, 140; Mexican limes, 138; persimmons, 397; Japanese pears, 371; Japanese oranges, 38,671.

IMPORTS, FRUIT GROWN OUTSIDE OF STATE, YEAR 1915.

(Figures indicate number of standard size packages.)

COUNTIES	Apples	Pears	Peaches	Oranges	Bananas	Lemons	Grapes	Plums and Prunes	Apri-cots	Cher-ries	Water-melons	Toma-toes	Canta-loupes	Straw-berries	Other Berries and Cr'nberries	Other Fruit
King	6,502	3,668	22,700	172,626	101,075	41,880	78,878	10,568	2,961	5,617	(pounds) 4,380,000	72,304	47,985	49,044	2,492	53,725
Thurston	600	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,100	.....	40 bbl.	.....
Franklin .....	.....	.....	.....	1,000	700	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Benton .....	.....	.....	.....	1,560	1,050	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lewis	630	.....	.....	5,000	1,500	.....	6,500	300	635	601	360,000	5,500	1,750	630	.....	.....
Pacific	250	100	100	2,500	506	.....	1,200	200	201	70	80,000	1,800	400	500	150	100
Grays Harb'r.	12,050	3,780	9,000	4,201	7,800	2,122	7,800	1,000	1,590	650	36,000	5,500	2,100	630	100	.....
Skamania .....	.....	.....	500	490	520	370	.....	.....	.....	.....	20,000	.....	150	.....	.....	.....
Wahkiakum	2,000	350	1,200	225	110	50	400	.....	75	.....	5,000	400	75	600	150	.....
Klickitat .....	.....	.....	.....	2,000	1,750	1,200	.....	14,000 lbs dried	.....	.....	.....	.....	500	.....	.....	.....
Clarke	1,000	.....	.....	1,000	600	720	500	.....	.....	.....	70,000	.....	335	800	.....	100
Spokane .....	.....	.....	.....	81,500	56,700	32,500	26,000	.....	.....	.....	1,890,000	8,800	16,800	4,410	2,000	.....
Pierce	1,278	255	2,568	51,739	85,300	10,141	22,705	.....	542	295	5,508	8,127	13,280	4,625	10,028	12,382
Owllitz	800	.....	.....	700	450	300	375	.....	1,000	.....	50,000	1,000	350	400	75	60
Garfield .....	.....	.....	.....	500	350	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Walla Walla .....	.....	.....	.....	5,500	8,400	4,000	.....	.....	.....	.....	450,000	.....	1,440	630	.....	.....
Columbia .....	.....	.....	.....	500	350	.....	.....	.....	.....	.....	.....	.....	350	.....	.....	.....
Yakima .....	.....	.....	.....	4,750	3,888	2,800	150	.....	.....	.....	24,000	250	350	1,200	250 lbs.	.....
Whatcom	649	1,264	6,346	17,384	9,267	2,130	10,074	1,278	521	826	181,786	10,134	4,375	7,334	425	.....
Snohomish .....	.....	.....	.....	6,800	14,440	1,700	10,900	1,000	.....	.....	120,000	1,000	1,700	2,300	.....	530

IMPORTATION OF VEGETABLES INTO WASHINGTON.

FROM ALL POINTS OUTSIDE OF STATE DURING YEAR 1914.

(The figures below give the number of standard size packages.)

COUNTIES	Pota- toes	Onions	Oab- bage	Lettuce	Cauli- flower	Mixed Vegetables	Sweet Potatoes	Celery	Aspar- agus	Rhu- barb	Cucum- bers	Tur- nips	Egg Plant	Car- rots	Corn
Asotin .....	.....	.....	.....	.....	.....	4,200	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clarke .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	300
Columbia	500	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Oowlitz	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grays Harbor	7,250	1,750	2,000	.....	.....	.....	.....	800	.....	.....	156	.....	.....	.....	.....
King	50,551	48,911	22,629	31,320	9,210	20,273	24,011	10,196	16,604	1,955	708	1,532	2,570	1,491	246
Klickitat .....	.....	2,000	1,800	.....	.....	.....	.....	250	.....	.....	500	.....	.....	.....	.....
Lewis	2,250	1,750	600	609	.....	.....	4,000	300	.....	51	200	.....	.....	.....	.....
Pacific	500	1,074	200	99	300	.....	.....	100	.....	.....	.....	.....	.....	50	.....
Pierce	6,750	10,250	6,000	.....	.....	56,400	.....	5,100	.....	200	189	.....	.....	.....	3,000
Skamania .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10
Spokane	8,000	8,000	1,000	.....	.....	43,200	12,300	1,200	.....	.....	185	.....	.....	250	.....
Thurston .....	.....	500	.....	.....	.....	.....	.....	.....	300	.....	.....	.....	.....	.....	.....
Wahkiakum	1,000	2,000	500	.....	.....	50	.....	50	.....	.....	100	.....	.....	.....	50
Walla Walla	7,000	.....	2,000	.....	.....	1,800	.....	.....	.....	.....	.....	.....	.....	.....	.....
Yakima .....	.....	.....	600	.....	.....	.....	.....	300	.....	.....	.....	.....	.....	.....	.....
Totals.....	83,821	76,235	37,329	32,028	9,510	125,923	40,811	17,796	16,904	2,421	1,986	1,532	2,652	1,791	3,606

NOTE: Additional vegetables were imported into King county from points outside of the state as follows: Peppers, 13,600; peas, 2,072; beets, 80; beans, 503; Brussels sprouts, 352; squash, 850; parsnips, 125; garlic, 483; artichokes, 882.

IMPORTS, VEGETABLES GROWN OUTSIDE WASHINGTON, YEAR 1915.

(The figures below give the number of standard size packages.)

COUNTIES	Pota- toes	Onions	Egg Plant	Cab- bage	Cucum- bers	Celery	Rhu- barb	Car- rots	Green Corn	Other Vegetables	Sweet Potatoes	Lettuce	Cauli- flower	Green Beans	Pep- pers
King	99,898	45,764	.....	20,580	.....	10,481	1,919	1,896	.....	122,968	.....	.....	.....	.....	.....
Thurston .....	.....	900	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lewis	1,500	2,400	20	600	183	300	27	.....	.....	.....	1,500	800	.....	.....	.....
Pacific	800	100	18	122	83	90	6	50	.....	700	.....	.....	.....	.....	.....
Grays Harbor	8,100	2,100	106	2,400	367	250	.....	.....	.....	.....	159	.....	75	90	96
Skamania .....	.....	100	.....	75	.....	.....	.....	.....	40	.....	.....	.....	.....	.....	.....
Wahkiakum	1,000	400	.....	.....	.....	.....	.....	.....	68	.....	.....	.....	.....	.....	.....
Klickitat	2,000	2,780	300	.....	.....	63	.....	.....	80	.....	.....	.....	.....	.....	.....
Clarke	2,600	400	60	40	.....	.....	.....	.....	80	.....	.....	.....	.....	.....	.....
Spokane	15,600	7,500	.....	6,000	.....	3,600	.....	.....	.....	.....	16,500	.....	.....	.....	.....
Pierce	23,722	10,799	.....	4,043	277	2,382	275	.....	40	25,986	.....	.....	.....	.....	.....
Cowlitz	750	1,000	.....	5,000	.....	.....	.....	.....	.....	7,500	.....	.....	.....	.....	.....
Walla Walla	28,500	12,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Yakima	1,400	950	.....	740	175	960	100	.....	.....	.....	.....	.....	.....	.....	.....
Whatcom	5,227	8,096	210	1,905	600	600	312	150	.....	.....	.....	.....	.....	.....	.....
Snohomish .....	.....	1,800	.....	300	.....	255	12	.....	.....	.....	.....	.....	.....	.....	.....

TOTAL AMOUNT IN POUNDS OF FRUITS AND VEGETABLES USED IN BY-PRODUCTS.—SEASON 1914.

COUNTIES	Apples	Pears	Peaches	Plums and Prunes	Apricots	Cherries	Beans	Squash	Grapes	Rasp- berries
Asotin .....	.....	155,200	84,000	.....	6,980	92,400	.....	.....	.....	.....
Benton	42,000	.....	.....	.....	.....	144,129	.....	.....	680,000	.....
Clarke .....	.....	310,782	.....	9,473	.....	6,000	.....	.....	14,821	.....
Island	207,600	.....	.....	16,200	.....	18,380	2,400	.....	4,129	27,000
King	654,994	766	302	.....	3,945	84,940	.....	.....	.....	135,542
Klickitat	134,400	43,400	108,400	64,140	152,400	.....	25,680	.....	.....	.....
Pierce	623,495	198,854	20,000	114,765	.....	206,071	1,985	37,704	.....	3,800,071
San Juan	420,000	102,000	.....	30,000	.....	18,840	.....	.....	.....	36,000
Skagit	25,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Skamania .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Snohomish .....	.....	24,600	.....	40,200	.....	4,200	.....	.....	.....	229,800
Spokane	7,144,000	.....	.....	.....	.....	3,000	3,000	.....	.....	.....
Thurston	975,000	450,000	228,000	492,000	.....	402,000	36,000	80,000	.....	174,000
Walla Walla	100,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Whatcom	758,580	276,280	.....	506,760	.....	817,460	409,880	.....	.....	1,043,731
Yakima	2,817,511	600,000	150,000	.....	.....	.....	.....	.....	.....	.....
Totals.....	14,202,580	2,161,862	585,702	1,368,538	168,905	1,297,420	478,445	67,704	678,950	4,946,144

COUNTIES RECEIVING WASHINGTON-GROWN FRUIT—1914
(The figures below give the number of standard size packages.)

COUNTIES	Apples	Pears	Peaches	Plums and Prunes	Apricots	Cherries	Grapes	Cantaloupes	Water-melons (pounds)	Tomatoes	Berries	Mixed Fruit
Clarke	500		5,000		225		300		1,000	200	1,250	
Cowlitz			3,000								100	
Garfield	650										650	
Grays Harbor	22,050	11,970	48,400	1,000	1,500	1,100	1,300				6,980	
King	447,000	48,000	215,814	10,000	24,917	54,359	65,000		692	40,154	178,237	
Lewis	7,500	1,200	25,200	800	978	408	2,000		1,000	3,100	2,100	
Pacific	4,410	510	5,847	300	250	712	804		1,000	1,100	1,630	
Pierce	106,470	22,050	69,000	3,000	5,000	7,200	15,800		1,000	2,200	46,020	1,900
Skamania			100						1,000			
Spokane	88,800	5,070	8,000	9,000	335	2,000	41,000		1,000	26,400	31,500	6,000
Wahkiakum	500	100	200		50	75				100	1,060	
Totals.....	679,216	90,223	410,561	30,528	33,306	66,429	128,040		692	73,484	265,047	7,900

COUNTIES RECEIVING WASHINGTON GROWN FRUIT, YEAR 1915.

(The figures below give the number of standard size packages.)

COUNTIES	Apples	Pears	Peaches	Grapes	Plums and Prunes	Apricots	Cherries	Water-melons (pounds)	Tomatoes	Cantaloupes	Strawberries	Other Berries	Mixed Fruit	Cranberries
Spokane	55,400	6,300	120,000	40,300	3,000	5,000	9,000	250,000	31,900	17,851	20,100	7,200		
Cowlitz	500		2,000								400	50		
Clarke			2,000			2,700								
Wahkiakum	2,000		800		10,000									
Skamania					2,000	150								
Pierce	66,008	11,868	127,702	20,012	4,189	10,000	12,257	230,046	8,179	14,500	6,796	11,756	888	
Grays Harbor	25,830	10,000	39,000	1,300	1,000	1,367	1,497		1,100		1,200	540		60 bbl.
Pacific	8,150	500	7,750	400	100	900	700	30,000	1,400	600	1,000	200	400	
Lewis	5,670	680	15,000	2,600	700	867	830	120,000	4,400	1,050	2,520			
King	384,008	21,341	213,136	24,591	16,364	28,194	40,006	637,500	45,306	48,502	99,126	36,371	146,348	
Columbia									1,100					
Walla Walla			1,000			250							1,200	
Garfield	3,730		3,000					30,000			1,200		600	
Yakima														
Whatcom	19,541	3,003	78,013	8,004	6,772	10,007	10,712	77,691	13,925	8,928	20,010	3,012		
Snohomish	16,500	4,000	8,300	6,500	2,800	7,500	4,500	70,000	4,500	2,400	7,500	1,500	530	

COUNTIES RECEIVING WASHINGTON-GROWN VEGETABLES—1914

(The figures below give the number of standard size packages.)

COUNTIES	Potatoes	Onions	Cabbage	Lettuce	Cauliflower	Mixed Vegetables	Celery	Asparagus	Rhubarb	Cucumbers	Turnips	Egg Plant	Carrots	Corn
Clarke	500	100				2,400								
Garfield							400		680	167		90	600	250
Grays Harbor	9,750	1,000					3,035	15,377	12,115	11,307	2,942	2,874	1,975	3,011
King	524,422	17,384	7,398	9,762	148	19,687		680	215	80	1,200	85	500	567
Lewis	4,250	1,000	1,400	3,400		1,200	600		401	30	250		250	313
Pacific	8,500	93	600	380	112	250	115			150		2,000		1,450
Pierce	83,250	5,500	1,000			9,000			600	264		500	250	1,250
Spokane	10,000	5,000	5,000			7,800	1,500			100				
Wahkiakum							50							
Totals.....	640,672	30,077	15,398	13,542	260	40,337	5,700	16,007	13,961	12,088	4,392	5,499	3,575	6,841

NOTE: Additional vegetables, as follows, were shipped into King county from other counties in the state, during this year: Rutabagas, 387; squash, 1,024; parsnips, 264; peppers, 3,814; spinach, 4, 161; beets, 900.

COUNTIES RECEIVING WASHINGTON GROWN VEGETABLES, YEAR 1915.

(The figures below give the number of standard size packages.)

COUNTIES	Potatoes	Onions	Egg Plant	Cabbage	Cucumbers	Celery	Rhubarb	Carrots	Green Corn	Other Vegetables
Spokane	15,000	4,500		1,200						
Cowlitz	750									
Pierce	117,675	9,976	1,383		35		147			7,588
Grays Harbor	15,500	1,000			808	569	600	150	299	
Pacific	9,000	950		500	318	350	204	150	200	240
Lewis	3,750	1,250		1,000	1,200	300			700	2,600
King	477,244	36,159		2,014	7,844		11,362	5,288		68,160
Columbia	1,000	750		400						1,200
Walla Walla				8,600		600				
Garfield	500	250		400						600
Whatecom	16,608	1,884	523	1,962	1,350	1,922	881	1,425	1,725	400
Snohomish	24,200	1,700	100	600	325	525	360	1,050	850	110

NURSERY STOCK PRODUCTION—SEASON 1914.

COUNTIES	Apples	Pears	Peaches	Plums and Prunes	Apricots	Cherries	Nuts	Grape Vines	Trees	Shrubs
Asotin	50,000	10,000	8,000	2,000	1,000	.....	.....	.....	.....	500
Benton	434,000	30,000	13,200	10,000	.....	4,400	.....	.....	.....	15,800
Chelan	105,000	1,790	5,000	.....	.....	.....	.....	.....	.....	1,000
Clarke	500	.....	250	75,000	.....	.....	200	.....	.....	.....
Cowlitz	6,000	142,000	500	5,500	.....	.....	.....	.....	.....	2,000
Douglas	20,000	.....	.....	500	.....	.....	.....	.....	.....	.....
Grant	650,000	90,000	2,000	3,000	3,800	18,000	8,500	.....	85,000	20,000
King	30,500	35,000	1,000	9,000	.....	20,000	.....	.....	.....	19,300
Klickitat	10,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mason .....	.....	.....	.....	.....	.....	.....	.....	100,000	.....	.....
Okanogan	75,000	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pierce .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Skagit	1,000	900	.....	500	.....	1,500	.....	.....	.....	44,788
Spokane	224,000	10,400	10,100	1,550	100	1,325	1,012	.....	95,500	1,500
Walla Walla .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	125,250
Yakima	648,696	172,956	171,854	68,971	32,267	43,533	13,655	.....	.....	3,600
Totals.....	2,254,696	492,446	206,904	176,821	71,867	89,758	18,367	100,000	180,500	398,843

NOTE: In addition to the above King county produced 16,000 berries and Yakima county produced 5,000,000 seedlings.

NURSERY STOCK PRODUCTION, YEAR 1915.

COUNTIES	Apples	Pears	Peaches	Plums and Prunes	Apricots	Cherries	Nuts	Grapes	Shrubs and Trees	
									Deciduous	Evergreen
Spokane	5,000	.....	.....	.....	.....	200	.....	.....	21,500	5,500
Clarke	800	.....	.....	50,500	.....	.....	.....	.....	.....	.....
Klickitat	10,000	1,000	800	.....	250	150	.....	.....	.....	.....
Mason .....	.....	.....	.....	.....	.....	.....	.....	200,000	.....	.....
Lewis .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
King	53,000	43,500	2,200	12,000	250	23,000	500	.....	560	.....
Walla Walla .....	.....	.....	.....	.....	.....	.....	.....	.....	12,850	21,600
Asotin	8,000	1,000	2,000	300	300	500	.....	.....	5,200	.....
Yakima	170,000	78,000	94,840	192,000	.....	134,300	.....	.....	198,075	218,600

IMPORTATIONS OF FOREIGN NURSERY STOCK.
FOR PERIOD JUNE 15, 1914, TO JULY 1, 1915.

FROM	TO	Orna- mental De- ciduous Trees and Shrubs	Coni- ferous Trees	Ever- greens	Field Grown Florist Stock	Fruit Trees and Fruit Tree Stock	All Other Plants	No. of Cases
Scotland	Bellingham...			100				1
Sweden	Cape Horn...						50	1
Belgium	Everett.....	104		105			95	3
Ireland	Lynden.....	48						1
France	Mt. Vernon...	2,250		990		2,000		2
Holland	Pt. Townsend.	280	12	45	50			2
Belgium	Pt. Townsend.	30		25				1
France	Prosser.....	2,925		75				1
Belgium	Snohomish....	50						1
Canada	Spokane.....	185						1
France	Spokane.....	4,500	200	1,700				1
Belgium	Spokane.....	385		55			181	7
Holland	Spokane.....	1,314		10				3
Holland	Seattle.....	17,673		3,144		30		129
Canada	Seattle.....	7					2,160	23
Ireland	Seattle.....	63					500	1
England	Seattle.....	765		3	24		94	7
Belgium	Seattle.....	808		151			886	34
Japan	Seattle.....	2,732	86	817	1,169			43
France	Seattle.....	200		5,564		15,660		5
Ireland	Tacoma.....	8						1
Belgium	Tacoma.....	300					117	9
Japan	Tacoma.....	232		260	191			9
Holland	Toppenish....					4,200		1
Belgium	Walla Walla..	102						1
France	Wenatchee....	1,849				43,000		3
France	Wapato.....	64,100		101,075		193,950	15,265	108
Totals.....		100,860	298	114,119	1,434	258,840	19,408	394

Total Imported plants, 494,959.

NURSERY STOCK FROM FOREIGN COUNTRIES.

JULY 1, 1915, TO JULY 1, 1916.

FROM	TO	Orna- mental De- ciduous Trees and Shrubs	Coni- ferous Trees	Ever- greens	Field Grown Florist Stock	Fruit Trees and Fruit Tree Stock	All Other Plants	No. of Cases
Belgium	Seattle.....	535	.....	772	.....	.....	.....	21
Holland	Seattle.....	14,013	.....	4,817	700	.....	200	123
Holland	Seattle.....	.....	.....	.....	.....	.....	.....	*41
British Columbia ..	Seattle.....	.....	.....	100	.....	.....	636	20
England	Seattle.....	3	.....	70	.....	250	.....	3
England	Thomas.....	5,000	.....	.....	.....	.....	.....	1
Japan	Seattle.....	6,975	.....	96	157	.....	132	24
Ireland	Seattle.....	130	.....	.....	.....	.....	.....	1
France	Seattle.....	5,560	.....	3,762	.....	.....	.....	8
Japan	Christopher..	70	.....	.....	430	.....	.....	5
Belgium	Thomas.....	190	.....	.....	.....	.....	.....	4
Belgium	Pt. Townsend.	55	.....	.....	.....	.....	.....	1
Japan	Kirkland.....	.....	.....	.....	125	.....	.....	2
Japan	Port Angeles..	1,000	.....	.....	.....	.....	.....	5
Holland	Walla Walla..	104	.....	.....	.....	.....	.....	1
England	Walla Walla..	300	.....	.....	.....	.....	.....	1
Ireland	Mt. Vernon...	153	.....	.....	.....	.....	.....	1
Holland	Mt. Vernon...	1,440	.....	.....	.....	.....	.....	2
Belgium	Snohomish...	150	.....	.....	.....	.....	.....	2
Holland	Snohomish...	1,245	.....	110	.....	.....	.....	5
Holland	Everett.....	4,068	.....	29	.....	.....	.....	8
Ireland	Everett.....	11	.....	.....	.....	.....	.....	1
Holland	Tacoma.....	1,580	.....	91	.....	.....	.....	10
Belgium	Tacoma.....	140	.....	.....	.....	.....	.....	2
Holland	Puyallup.....	285	.....	.....	.....	.....	.....	1
Belgium	No. Yakima...	25	.....	.....	.....	.....	.....	1
France	Wapato.....	132,550	4,420	1,100	11,000	7,000	500	34
France	Wapato.....	.....	.....	.....	.....	.....	.....	†6
Belgium	Spokane.....	465	.....	.....	.....	.....	.....	8
England	Spokane.....	818	.....	.....	.....	.....	.....	1
Japan	Spokane.....	811	.....	.....	.....	.....	.....	8

* No. invoice. † 374 pounds pear and 85 quarts cherry seeds.

ORCHARD PLANTINGS FOR FALL 1914.
AS SHOWN BY COMPILATION OF POST CARD NOTICES.
D—Nursery stock grown within Washington. F—Grown outside of the state.

COUNTIES	Apples	Pears	Peaches	Plums and Prunes	Apri-cots	Cher-ries	Quinces	Nuts	Grape Vines	Rasp-berries	Black-berries	Straw-berries	Miscel-laneous Berries	Miscel-laneous Roots	Orna-mental Trees	Orna-mental Shrubs
Adams	(D) 70	26	18	19	16	61	.....	.....	76	24	29	100	6	.....	91	163
Asotin	(F) 7	4	3	2	.....	2	1	.....	3	.....	.....	.....	4	10	34	20
Benton	(D) 21	3	14	1	2	9	.....	20	6	6	10	.....	14	.....	2	31
	(F) 5	.....	14	.....	3	1	.....	12	2	6	.....	.....	.....	.....	6	3
Benton	(D) 36	9	19	12	3	46	2	1	200	514	204	.....	1,146	3	.....	146
Chehalis	(F) 100	561	.....	5,500	9	210	.....	.....	25	.....	.....	.....	110	.....	6	12
	(D) 243	58	11	100	1	72	10	133	.....	147	1,163	400	183	185	60	444
	(F) 369	61	19	107	.....	90	7	8	27	208	177	400	75	192	191	1,278
Chelan	(D) 3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	(F) 172	1,295	92	1,080	85	156	10	20	4	.....	2	.....	.....	100	7	48
Clallam	(D) 236	54	10	72	4	58	2	6	8	14	72	200	208	54	29	129
	(F) 26	2	.....	3	.....	12	2	.....	1	.....	.....	.....	.....	.....	.....	2
Clarke	(D) 71	21	39	49	4	47	1	21	12	.....	4	24	13	.....	6	16
Columbia	(F) 792	365	364	3,742	47	267	12	447	100	77	118	200	46	58	53	391
	(D) 64	8	24	9	13	31	2	4	55	42	38	300	55	1,000	41	222
Cowlitz	(F) 851	136	1,081	11	11	139	2	14	135	74	40	850	16	544	75	69
	(D) 164	18	53	36	26	62	4	46	46	.....	8	.....	89	.....	5	12
	(F) 266	37	37	33	28	65	20	56	18	64	31	5,250	104	61	5	62
Douglas	(D) 122	13	5	21	2	33	.....	8	2	10	2	475	4	.....	12	.....
Ferry	(D) 6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	57	11
Franklin	(F) 23	12	17	12	3	17	1	4	2	10	.....	150	4	44	2	5
	(D) 18	9	8	6	10	19	1	60	18	6	3	.....	.....	.....	6	24
Garfield	(D) 31	2	9	12	5	38	.....	10	6	.....	.....	.....	.....	.....	794	145
	(F) 4	6	6	1	.....	6	.....	.....	37	24	16	100	.....	.....	15	55
Grant	(D) 239	38	54	67	80	89	.....	.....	12	6	14	50	.....	.....	50	.....
	(F) 148	10	12	14	5	23	.....	12	31	12	4	.....	18	6	78	92
Island	(D) 289	61	16	99	7	92	10	4	30	23	18	250	14	88	244	43
	(F) 212	50	10	62	.....	96	.....	134	18	13	30	328	62	.....	8	18
Jefferson	(D) 8	2	3	3	.....	.....	.....	.....	28	305	102	1,150	80	.....	20	164
	(F) 2,519	1,042	136	527	21	1,089	149	97	.....	.....	.....	.....	.....	.....	.....	.....
King	(D) 451	221	93	256	33	990	38	136	101	489	508	1,529	1,426	489	357	2,568
	(F) 531	256	61	171	27	383	41	28	61	251	58	7,479	558	13,684	950	1,788
Kitsap	(D) 209	118	21	55	4	241	3	60	66	168	109	3,863	201	25	83	757
	(F) 209	118	21	55	4	241	3	60	12	6	22	200	.....	.....	12	87

Kittitas	D	167	161	45	87	18	134	1	7	32	227	18	88	31	4	81	582
Klickitat	F	2,062	74	1	4	3	14	1	1	1	...	...	70	1	4	7	40
Lewis	D	221	1	10	17	8	11	...	62	1,204	200	...	106	6	135	50	28
Lincoln	F	1,025	278	301	384	11	380	...	33	75	273	1,118	7,430	418	50	47	420
Lincoln	F	1,307	365	58	497	5	543	...	328	65	407	412	1,060	454	217	470	627
Mason	D	370	92	88	160	69	148	...	8	77	92	13	6	178	12	450	522
Mason	F	682	106	42	160	34	208	...	20	6	35	624	511	78	44	150	77
Mason	D	297	70	28	85	...	109	...	16	15	6	29	108	22	18	11	102
Mason	F	34	6	3	11	2	6	...	3	...	...	...	...	...	...	...	...
Okanogan	D	8,105	2	6	2	...	7	...	...	4	50	...	...	...	...	...	...
Okanogan	F	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pacific	D	218	97	4	72	4	90	...	5	18	55	51	875	211	136	16	18
Pacific	F	193	54	1	39	...	41	...	11	3	40	115	150	54	50	49	227
Pend Oreille	D	1,505	184	61	253	54	308	...	16	34	481	434	7,538	427	84	60	121
Pend Oreille	F	66	4	59	28	...	2	...	4	2	10	...	150	4	44	22	5
Pierce	D	1,620	786	84	493	6	700	...	87	35	353	245	2,094	563	...	106	5,450
Pierce	F	1,056	280	98	316	8	621	...	185	156	77	95	1,014	215	932	324	1,768
Skagit	D	692	223	49	209	17	581	...	20	30	523	131	3,237	414	539	65	690
Skagit	F	570	202	53	181	13	843	...	82	32	179	53	675	109	...	97	692
Skamania	D	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Skamania	F	59	65	2	18	2	10	...	...	...	...	...	...	...	...	...	...
Snohomish	D	1,291	500	98	436	24	462	...	51	219	154	146	5,957	773	468	4	12
Snohomish	F	1,806	385	154	506	16	950	...	402	115	296	376	5,550	251	123	213	1,021
Spokane	D	654	119	98	163	21	164	...	1	59	94	42	2,100	1,448	53	181	149
Spokane	F	1,570	120	172	113	39	218	...	20	121	74	69	625	19	265	301	1,795
Stevens	D	255	84	18	68	8	108	...	8	10	33	30	300	55	...	14	39
Stevens	F	12	4	8	3	...	25	...	10	2	10	...	275	4	44	2	9
Thurston	D	460	807	24	175	4	843	...	4	42	57	217	1,275	131	2	345	104
Thurston	F	1,161	208	29	108	1	489	...	27	238	46	59	500	201	50	31	388
Wahkiakum	D	27	11	...	3	7	19	...	...	...	55	61	275	20	...	...	12
Wahkiakum	F	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Walla Walla	D	32	10	25	14	2	90	...	4	18	...	3	...	...	25	1	7
Walla Walla	F	2,978	8	130	60	14	110	...	23	104	143	35	500	36	...	70	784
Whatcom	D	592	492	47	124	10	438	...	40	29	172	243	50	69	...	88	825
Whatcom	F	681	221	85	185	8	559	...	112	30	241	66	3,708	278	132	260	874
Whitman	D	107	19	9	14	10	78	...	1	32	98	297	200	82	...	104	235
Whitman	F	629	112	269	174	90	388	...	10	229	868	455	5,524	777	...	600	1,134
Yakima	D	12	4	...	...	...	13	...	...	...	3	3	...	...	...	122	64
Yakima	F	85	51	34	69	120	54	...	1,742	8	16	81	350	4	74	479	253
San Juan	D	80	16	2	83	7	71	...	2	7	72	100	818	115	10	11	79
San Juan	F	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals		41,048	10,706	4,376	17,271	1,084	18,749	751	4,695	4,359	7,992	8,400	76,377	11,854	20,055	8,810	29,906

Kittitas	D	500	306	175	9	238	2	21	28	.....	22	5,480	101	121	70	1,271
Klickitat	F	18	81	1	4	11	.....	.....	9	10	8	100	44	104	6	23
Lewis	D	246	20	29	7	114	7	232	30	78	97	1,800	24	43	18	26
.....	F	1,008	128	51	63	114	9	38	.....	10	.....	1,000	17	16	2	106
.....	D	435	1,117	84	.....	149	2	43	130	70	12	3,127	30	1,071	88	730
Lincoln	F	449	99	99	2	143	11	7	302	88	11	4,512	21	51	98	555
.....	D	555	92	45	41	154	.....	.....	45	43	.....	7,025	46	47	734	876
Mason	F	302	133	113	63	145	.....	7	27	33	97	1,700	6	110	173	274
.....	D	123	1	2	1	5	1	4	400	10	8	2,800	16	4	9	.....
.....	F	49	8	15	.....	8	.....	4	129	100	2	208	6	110	58	22
Okanogan	D	1,006	102	70	879	67	8	76	25	24	.....	8,025	58	88	412	181
.....	F	1,983	407	220	119	356	29	42	6	11	4	6,524	6	110	208	274
Pacific	D	111	29	25	2	28	.....	.....	202	58	76	8,825	44	89	59	571
.....	F	163	32	39	.....	39	1	11	304	88	140	7,400	38	12	28	311
Pend Oreille	D	96	58	33	6	62	4	.....	.....	120	20	512	169	63	29	35
.....	F	87	7	32	.....	11	.....	.....	8	50	173	300	12	220	114	64
Pierce	D	1,004	2,083	257	33	1,386	12	79	.....	60	24	20,909	1,494	11,764	1,295	579
.....	F	654	814	156	9	1,492	22	106	.....	145	79	2,874	339	688	606	8,790
San Juan	D	87	291	11	6	188	11	.....	115	1,273	911	500	60	3	23	.....
.....	F	6	16	88	.....	24	1	3	112	65	882	100	.....	.....	.....	30
Skagit	D	315	96	135	4	160	20	8	.....	14	13	10,712	180	504	92	76
.....	F	183	29	38	.....	45	2	32	.....	25	18	1,262	14	12	28	2,344
Skamania	D	.....	.....	.....	.....	.....	.....	.....	52	108	48	400	15	114	62	139
.....	F	282	302	27	3	55	2	7	20	46	106	.....	.....	.....	.....	.....
Snohomish	D	1,306	1,621	268	16	550	13	10	.....	.....	.....	7,500	1,519	999	456	970
.....	F	440	94	138	8	157	3	42	42	44	506	1,666	92	532	247	707
Spokane	D	551	135	91	30	172	22	46	79	264	140	43,477	168	1,113	530	1,308
.....	F	5,725	1,064	2,269	115	1,217	26	367	23	38	49	47,414	42	1,064	1,595	6,506
Stevens	D	773	165	164	69	209	16	14	123	110	28	2,324	87	28	48	809
.....	F	1,846	567	446	78	661	5	26	642	512	296	6,674	40	451	502	914
Thurston	D	167	910	27	24	68	2	7	119	71	125	5,525	64	24	38	16
.....	F	487	233	44	12	348	2,501	77	164	320	187	850	24	89	33	157
Wahkiakum	D	4	2	1	.....	1	.....	.....	61	40	.....	200	.....	3	.....	.....
.....	F	.....	.....	.....	.....	.....	.....	.....	189	15	111	.....	.....	.....	.....	.....
Walla Walla	D	100	22	69	10	64	6	15	83	9	21	2,978	97	84	36	225
.....	F	11,000	5,091	844	60	365	.....	150	426	139	122	390	131	1,850	269	485
Whatcom	D	1,563	886	308	16	945	20	28	98	142	88	6,606	855	948	557	350
.....	F	272	85	98	1	464	3	59	29	55	22	1,304	22	336	190	522
Whitman	D	369	40	44	64	157	2	9	92	148	5	11,685	27	97	13,148	4,133
.....	F	627	123	129	73	240	2	24	99	216	72	12,042	19	234	13,547	4,756
Yakima	D	21,524	8,092	2,522	131	821	15	1,664	964	1,601	147	680	20	844	323	1,396
.....	F	4,415	345	91	7	163	10	997	489	54	100	21,750	448	988	914	1,841
Totals.....	D	51,894	19,897	6,926	1,584	9,675	298	2,797	5,432	7,850	6,257	264,101	13,171	83,579	29,975	58,573
.....	F	48,615	11,634	7,835	1,232	11,573	2,728	3,188	7,550	6,884	7,016	172,284	8,431	10,673	29,271	75,087

ORCHARD PLANTINGS FOR FALL 1915.
 AS SHOWN BY COMPILATION OF POST CARD NOTICES.
 D—Nursery stock grown within Washington. F—Grown outside of the state.

COUNTIES	Apples	Pears	Peaches	Plums and Prunes	Apri-cots	Cher-ries	Quinces	Nuts	Grape Vines	Rasp-berries						Orna-mental Trees	Orna-mental Shrubs
Adams	191	68	19	93	45	187	2	18	23	6	22	1,877	26	140	3	612	769
Asotin	65	24	5	30	8	33	...	...	4	30	6	...	...	...	...	70	81
Benton	1	...	15	2	2	22	...	...	8	2	...	...	...	...	...	4	8
	99	21	130	33	20	86	3	185	50	160	99	5,050	14	...	...	105	181
	1,000	300	25	257	606	555	...	133	8,000	52	19	200	19	20,001	...	1,116	979
Chelan	60	...	...	...	50	75	...	29	...	124	17	3,225	1,221	...	...	7	42
	16,051	5,805	302	1,513	565	1,570	16	53	332	304	155	542	...	...	...	350	1,062
Challam	316	14	24	34	9	48	...	69	24	20	23	10,066	40	237	...	247	606
	275	81	88	103	50	188	9	0	13	64	99	931	143	654	...	181	547
Clarke	71	15	3	16	6	34	63	12	13	141	51	2,675	506	20	...	4	74
	70	23	72	...	13	29	...	13	...	35	14	...	30	74	...	6	65
Columbia	905	426	698	10,080	34	335	16	136	650	89	16	16,240	2,019	23	...	173	813
	36	14	41	8	7	25	2	2	40	61	19	50	46	143	...	17	192
Cowlitz	25	8	27	14	9	22	...	38	20	10	5	2,400	6	121	...	94	136
	280	393	92	...	2	185	...	50	7	25	33	2,900	222	218	...	31	114
Douglas	137	36	30	1,362	6	33	1	6	...	41	...	1,825	67	...	...	9	83
	527	541	70	39	68	106	1	3	25	111	13	1,845	8	17	...	123	920
Ferry	236	34	23	53	35	80	...	12	28	65	52	10,845	42	120	...	6,709	102
	56	36	12	10	4	20	...	2	718	24	...	600	30	...	...	4	10
Franklin	366	84	5	140	6	140	...	5	...	149	99	3,175	48	161	...	181	122
	108	24	1	11	1	11	...	36	12	18	6	...	32	124	...	239	305
Garfield	24	2	5	8	1	4	...	4	9	44	16	72	53	45	...	62	86
	50	9	11	25	2	26	...	10	230	25	26	318	64	12	...	14	53
Grant	49	5	12	65	4	7	...	5	27	45	38	344	36	264	...	71	117
	4,540	772	171	243	375	863	16	15	393	56	67	12,400	3	531	...	800	755
	127	25	20	32	67	43	...	233	31	14	21	1,160	26	6	...	133	232
Grays Harbor	296	96	12	63	...	49	14	53	13	739	175	3,847	1,087	302	...	21	236
	408	79	90	147	11	138	8	13	223	246	192	3,662	63	461	...	431	1,755
Inland	1,545	94	69	101	7	141	9	11	44	223	157	2,850	177	223	...	22	166
	405	96	29	133	4	104	3	...	10	45	32	2,850	230	54	...	7	104
Jefferson	...	109	4	202	9	3	...	...	5	36	6	...	161	112	...	...	46
	34	10	16	9	2	20	...	2	...	34	13	1,974	14	19	...	100	108
King	6,047	1,980	251	1,199	102	8,276	163	136	497	2,591	1,528	87,565	2,372	4,120	...	6,430	17,279
	1,103	430	146	321	41	512	23	265	150	863	1,141	17,923	289	1,401	...	415	2,572
Kitsap	709	398	212	494	36	572	20	135	95	272	38	8,874	475	500	...	60	1,808
	30	...	...	5	...	7	...	8	24	42	48	5,475	25	151	...	17	46

Kittitas	D	661	200	163	176	131	313	7	22	125	312	398	14,572	192	227	510	464
Klickitat	F	157	80	15	18	11	68	4	2	18	52	30	9,511	33	00	74	696
Lewis	D	8,000	1,000	30	70	25	300	...	140	59	25	...	...	30	...	20	76
Lincoln	F	948	259	110	204	24	108	4	37	335	121	196	11,220	79	209	148	231
Mason	D	84	42	18	66	5	81	...	13	6	15	23	500	75	12	22	664
Okanogan	F	1,221	272	132	438	18	662	19	277	182	198	221	4,964	1,143	712	262	1,631
Pacific	D	1,812	325	64	182	106	406	13	7	88	...	22	712	99	687	408	1,358
Pend Oreille	F	189	128	329	65	56	62	1	9	41	241	36	10,117	45	887	736	249
Pierce	D	112	35	17	44	...	79	...	...	39	82	2	1,400	12	260	6	8
San Juan	F	28	...	21	9	...	8	...	...	5	...	...	4,200	2	50	3	71
Skagit	D	34,439	858	287	208	508	661	19	324	1,016	294	170	2,408	38	50	102	136
Skamania	F	6,081	5,148	72	3,222	67	3,777	26	144	859	190	174	17,180	186	843	1,088	426
Snohomish	D	182	81	1	52	...	29	4	...	16	155	12	637	215	24	4	278
Spokane	F	154	24	6	55	...	18	...	...	8	44	43	8,080	3	60	21	185
Stevens	D	206	87	13	52	...	43	...	...	14	48	16	1,060	57	374	18	36
Thurston	F	88	22	2	9	...	8	...	...	12	285	32	640	60	456	120	51
Wahkiakum	D	347	322	35	200	3	174	3	32	257	573	5,949	13,770	1,011	28,949	87	1,841
Walla Walla	F	708	174	85	225	9	518	26	153	91	180	45	9,659	221	228	2,124	1,730
Whatcom	D	90	243	11	46	27	69	3	2	...	30	7	100	18	...	312	505
Whitman	F	...	...	...	...	...	...	...	...	...	...	...	1,200	...	...	...	...
Yakima	D	1,239	361	86	802	42	657	19	341	125	115	73	4,152	215	89	533	1,778
Totals	F	283	16	14	45	9	63	11	8	33	22	5	4,248	52	133	60	887
	D	42	8	56	18	6	11	7	...	13	30	6	...	31	...	39	...
	F	18	367	25	96	5	50	1	15	1	52	2	787	12	...	18	68
	D	1,561	350	236	318	12	588	54	60	58	478	173	1,219	453	1,619	137	1,921
	F	933	385	71	311	24	924	11	154	68	262	106	17,867	186	540	498	1,481
	D	5,385	262	220	240	118	1,106	26	45	185	5,030	118	85,860	515	15,500	2,038	10,024
	F	3,518	862	388	1,227	88	1,029	47	211	1,083	862	397	409,296	582	729	950	4,205
	D	1,403	273	181	191	47	229	11	3	169	124	40	7,825	309	550	71	341
	F	820	156	86	144	35	366	17	40	86	239	115	21,012	505	149	187	452
	D	152	59	6	29	5	70	4	7	15	1,525	12	1,125	904	1,108	110	75
	F	347	549	23	120	12	709	6	39	40	72	46	4,145	78	82	56	351
Walla Walla	D	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Whatcom	F	68	15	...	15	...	...	...	...	...	...	...	...	...	...	...	...
Whitman	D	160	30	70	604	12	104	15	19	...	22	...	250	23	10	25	155
Yakima	F	186	18	209	790	29	155	2	32	2,517	45	67	2,500	171	35	677	440
	D	231	49	9	45	24	180	7	75	185	30	98	9,149	77	44	491	1,224
	F	794	175	23	176	1	272	8	16	8	36	18	475	270	112	28	134
	D	678	127	72	238	101	291	12	106	56	94	42	4,645	460	390	267	2,288
	F	318	155	123	35	67	291	74	13	99	233	40	2,874	311	713	889	340
	D	12,766	1,501	1,036	1,423	1,773	113	2	51	1,131	143	87	7,363	120	184	558	1,887
	F	870	78	10	2,221	...	124	1	872	4,048	562	73	9,025	114	224	551	836
Totals	F	123,575	27,606	7,105	44,273	5,565	23,849	889	5,564	24,563	19,088	12,486	860,638	19,120	86,326	33,259	71,466

LIST OF LICENSED NURSERYMEN AND AGENTS.

Licenses Expire July 1, 1917.

<i>Name</i>	<i>Address</i>
Beall Greenhouse Co.	Vashon, Wash.
Bon Marche	Seattle, Wash.
J. J. Bonnell	Seattle, Wash.
E. E. Brown	Detroit, Wash.
The Burdett Co.	Seattle, Wash.
A. J. Burt, Florist	Spokane, Wash.
J. J. Butzer	Portland, Ore.
Burien Lake Nursery	Seattle, Wash.
Capital City Nurseries & Greenhouse	Olympia, Wash.
Capitol City Nursery Co., Inc.	Salem, Ore.
Agts: C. H. Dahle	Everett, Wash.
T. B. Warring	Oak Harbor, Wash.
Capital Hill Floral Co.	Seattle, Wash.
Gleason & Carver	Seattle, Wash.
Christopher Nurseries	Christopher, Wash.
Agts: E. H. Gilbert	Chehalis, Wash.
E. H. Goodwin	Tacoma, Wash.
E. M. Jensen	Gig Harbor, Wash.
Geo. McCandlish	Christopher, Wash.
Clarke Bros.	Portland, Ore.
W. H. Davis	Kirkland, Wash.
Henry A. Dreer	Philadelphia, Pa.
Agt: Jas J. Karins	Riverton, N. J.
Jas. Driscoll	Spokane, Wash.
Everett Floral Co.	Everett, Wash.
Evergreen Nursery	Seattle, Wash.
Fremont Floral Co.	Seattle, Wash.
M. Furuya Co., Inc.	Seattle, Wash.
Agts: D. Arizumi	Seattle, Wash.
K. Kurosaka	Seattle, Wash.
S. Morinaka	Tacoma, Wash.
T. Motosaka	Crystal Springs, Wash.
German Nurseries & Seed House	Beatrice, Nebr.
Otto Heege	Seattle, Wash.
A. A. Hinz	Tacoma, Wash.
Hollywood Gardens, Inc.	Seattle, Wash.
Home Nursery Co.	Richland, Wash.
Agt: C. S. Gibbs	Richland, Wash.
Hoyt Bros. Co.	Spokane, Wash.
D. H. Hulseman	Lakeside, Wash.
Island Nurseries & Fruit Farm	Vashon, Wash.
A. A. Kelley, Nurseryman & Gardener	Spokane, Wash.
R. M. Kellogg Co., Inc.	Three Rivers, Mich.
Lakeview Nursery, E. Bladine, Prop.	Seattle, Wash.
Paul E. Lange	Seattle, Wash.
Latona Floral Company	Seattle, Wash.
Chas. H. Lilly Co.	Seattle, Wash.
Lindley Nurseries	Seattle, Wash.
Madison Park Floral Co.	Seattle, Wash.
Chas. Malmo	Seattle, Wash.
H. W. Manike	Tacoma, Wash.
McCormack Bros.	Tacoma, Wash.
Thos. B. Meehan Co.	Dresher, Pa.
Methow Trading Co., Inc.	Winthrop, Wash.
Milton Nursery Co.	Milton, Ore.
Agts: J. M. Coble	Huntsville, Wash.
O. E. Batchell	Camas, Wash.
Oscar Hill	Walla Walla, Wash.
W. W. Hobbs	Rockford, Wash.
P. E. Nickerson	Prosser, Wash.
Fred I. Moffet	Ellensburg, Wash.
Northern Pacific Nursery	Toppenish, Wash.
D. Nishitani	Seattle, Wash.
Oregon Nursery Co., Inc.	Orencia, Ore.
Agts: W. A. Perry	Olympia, Wash.
R. W. Bignell	Wenatchee, Wash.
C. C. Cushman	Tacoma, Wash.
Harry Dean	Seattle, Wash.
Geo. Delaney	Gold Bar, Wash.
J. A. Fuller	Chehalis, Wash.
G. W. Gant	North Yakima, Wash.
C. S. Hill	Oak Point, Wash.

Oregon Nursery Co., Inc.—Continued:

Agt: B. F. Johns	Stevenson, Wash.
J. McClallum	Vancouver, Wash.
John Morrison	Aberdeen, Wash.
J. B. Palmer	Chehalis, Wash.
J. B. Patton	Spokane, Wash.
B. T. Perdue	Brush Prairie, Wash.
D. E. Vernon	Spokane, Wash.
Ornamental & Fruit Nursery Co.	Wapato, Wash.
Agt: C. A. Appleget	North Yakima, Wash.
Overman's Nursery	Spokane, Wash.
Frank E. Payne	Camas, Wash.
J. B. Pilkington	Portland, Oregon
Pioneer Floral Co.	Seattle, Wash.
Portland Seed Co.	Portland, Ore.
Agt: F. E. Davis	Centralia, Wash.
Portland Wholesale Nursery Co., Inc.	Portland, Ore.
O. M. Pruder	Puyallup, Wash.
Puyallup Nursery	Puyallup, Wash.
Quaker Nurseries	Salem, Ore.
Agt: J. W. Ray	Pe Ell, Wash.
E. Riegel & Cooper, W. I.	Vancouver, Wash.
Rosala Bros.	Seattle, Wash.
Rosencraft Fruit Farm	Sumner, Wash.
Rose Valley Nursery	Portland, Ore.
Routledge Seed & Floral Co., Inc.	Portland, Ore.
Russelville Nurseries, Inc.	Portland, Ore.
Agt: Geo. Hale	Portland, Ore.
F. L. Whitehead	Crawford, Wash.
Salem Nursery Co.	Salem, Ore.
Agt: J. E. Barnett	Napavine, Wash.
H. L. Clark	Auburn, Wash.
J. F. Honeyford	Sugumish, Wash.
N. Van Valkenburg	Kirkland, Wash.
J. H. Wylie	Tacoma, Wash.
Sandved Nursery	Seattle, Wash.
Seaview Park Greenhouse & Nursery	Seattle, Wash.
Seattle Floral Co.	Seattle, Wash.
Joel Shomaker	Nellita, Wash.
Silva-Bergholdt Co., Inc.	New Castle, Calif.
Stark Bros. Nurseries & Orchard Co., Inc.	Louisiana, Mo.
C. D. Stephens	North Yakima, Wash.
Storrs & Harrison Co., Inc.	Painesville, Ohio
C. P. Tate	Grandview, Wash.
Toppenish Nursery Co.	Toppenish, Wash.
Agt: C. V. Abrahamson	Everett, Wash.
Garrison Turner	Seattle, Wash.
University Nursery & Greenhouse	Seattle, Wash.
The Villa Nursery	Portland, Ore.
Agt: C. V. Taggart	North Portland, Ore.
Chas. H. Waight	Seattle, Wash.
Washington Nursery Co., Inc.	Toppenish, Wash.
Agt: W. H. Ball	Palouse, Wash.
W. F. Barth	Anacortes, Wash.
Samuel G. Hall	Spokane, Wash.
A. M. Johnson	Shelton, Wash.
D. J. Kalkwarf	Ritzville, Wash.
Mike Linder	Ellensburg, Wash.
J. W. Petrain	Vancouver, Wash.
J. M. Titus	Bellingham, Wash.
G. W. Thomas	Dayton, Wash.
Henry Woehr	Ritzville, Wash.
Wenatchee Home Nursery	Wenatchee, Wash.
Alton R. Wheelock & Herbert E. Congdon	North Collins, N. Y.
White Salmon Nursery	White Salmon, Wash.
S. P. Whitney	Seattle, Wash.
F. A. Whitney	Seattle, Wash.
O. J. Wingren	La Conner, Wash.
F. W. Woolworth & Co.	Tacoma, Wash.
Yakima Valley Nursery Co., Inc.	Toppenish, Wash.
Agt: Paul Blanchet	Enumclaw, Wash.
Mark E. Carroll	Buckley, Wash.
Young & Lester	Walla Walla, Wash.
W. D. Young	Kennewick, Wash.
G. I. Wibra	Chehalis, Wash.

REPORT ON FOODS, FEEDS, FERTILIZERS, DRUGS, OILS AND BAKERY INSPECTION

In compliance with the law, I am submitting herewith the second report of the Fourth Division of the State Department of Agriculture, covering the period from August 1, 1914, to and including July 31, 1916, the work of this division embracing foods, feeds, fertilizers, drugs, oils, and bakery inspection.

In the administration of this division, I have endeavored to conduct the work in harmony with the policy of the state administration; that is, to accomplish as much work as possible with the least possible expense.

During the period covered in this report, there were employed in food, feed, fertilizer, and bakery inspection work but one inspector all of the time, and three a part of the time, in addition to myself, and but one drug inspector for the period from August 15, 1914. In oil inspection, there has been but two inspectors all the time, and four a part of the time. The duties of some of the food inspectors and the drug inspector carried them to practically every town and city of any size in the state and covered the inspection of foods and drugs at the factory and in the wholesale and retail establishments, as well as restaurants, hotels, hospitals, doctors' offices, and state institutions.

Inspection was given to grocery stores, meat markets, cold storage plants and all places where food and drug products are offered for sale or stored. The total number of food and drug inspections made during the biennium was 16,604, subdivided as follows: Groceries, 5,088; meat markets, 1,886; butter stores, 1,012; fish stalls, 213; fruit stands, 267; miscellaneous stores and places, 3,435; bakeries, 653; restaurants, 142; vegetable stands, 178; warehouses, 39; cold storage plants, 49; slaughter houses, 98; factories, 26; plers, 24; confectioneries, 83; wholesale groceries, 54; commission houses, 6; drug stores, 2,076; hospitals, 100; soft drink stands, 634; doctors' offices, 500; barber shops, 23; peddlers' stock, 2; state institutions, 16.

In the course of the foregoing inspections, 90,101 packages of foods and drugs, 286,257 pounds of bulk goods, and 15,353 dozen eggs, were found to violate the law and to be unfit for use and were condemned and destroyed.

Reports of these various inspections are on file in the Department.

We also gathered and submitted for analyses 675 samples of foods and drugs, and 132 samples of stock feeds, suspected of violating the pure food and drug law, and 205 samples of fertilizers.

In addition to our regular inspection work, we have conducted an educational exhibit and campaign covering a period of five weeks at

four fairs and at the Women's State Federation convention, at Spokane. I feel that this feature of our work has had proportionately as wholesome and beneficial an effect in preventing the marketing of unwholesome food as have the prosecutions brought and the penalties enforced under the pure food law.

In addition to the above educational work, the undersigned addressed the National Convention of Retail Grocers at San Francisco, in May, 1915; the National Convention of Food Control Officials, in August, 1915; the State Retail Grocers' convention at Tacoma, in October of the same year; the State Federation of Women's Clubs, in June, 1915; the Kalama Women's Club, the Wenatchee Women's Club, the Knights of Columbus at Seattle, a meeting of feed manufacturers at Seattle, and numerous retail grocers' and other organization meetings in different parts of the state. These addresses were designed to make the work of this division of the most immediate service to the dealers and consumers in the state and to procure the widest possible public co-operation in the work.

During the biennium the undersigned prepared and issued a bulletin on food and food values, two bulletins relating to stock feeds, and one bulletin covering sanitary regulations, besides codifying and revising the laws and regulations relating to this division.

PROSECUTIONS.

Thirty-two prosecutions for violations of the pure food and drug law were instituted by this division during the above period. They resulted in twenty-six convictions, two dismissals, one because the offender went into bankruptcy and one by the prosecutor without the consent of the division, and two acquittals. Two cases are still pending. The aggregate fines and forfeitures were \$1,590.00, in addition to the value of the foods and drugs condemned and destroyed.

It is the policy of the division to be very careful in the institution of prosecutions. That accounts for our almost uniform success in securing convictions. It is also our policy, when prosecutions are begun and we are satisfied the offense has been wilful and deliberate, to prosecute vigorously and without compromise. I have personally attended and given direction to practically all prosecutions. The division believes that no law is important except as it is enforced.

An unfortunate error on the part of a deputy prosecutor caused considerable trouble. The deputy filed a case in the name of the commissioner of agriculture instead of in the name of the State of Washington. That trouble has been satisfactorily adjusted. In order to prevent a recurrence of such a mistake, we have since drafted and printed in the laws and regulations for this division proper forms of complaints for the guidance of inspectors and prosecutors.

VINEGAR.

During the biennium, we have had some trouble with the enforcement of the regulations relating to vinegar. The state law relating

to vinegar conflicts with the federal ruling on the same subject. While the vinegar situation in the state is not ideal, it will compare favorably with that in any state in the Union.

I might say in passing, that I discussed the vinegar situation with many food control officials at the National Food Commissioners' convention at Berkeley, Cal., and all of them agreed that while it was one of the most vexatious problems they had to meet, the keenness of competition between manufacturers was the greatest source of trouble, and that since the life and health of consumers was not involved, the purely commercial nature of the problem robbed it of all dangers to the public. The products of all the large manufacturers of vinegar doing business in the state have been sampled numerous times within the period covered by this report. The territory to inspect is so large and the force of inspectors so small, it has been impossible to give more attention to this item without seriously neglecting items of much more importance and on which the life and health of the public largely depends. We are keeping as close supervision of this matter as our force will permit. Vinegar prosecutions will be brought in every instance where the chemists are prepared to fortify their analysis of adulteration by expert testimony.

CONCENTRATED STOCK FOOD.

The supreme court in a decision handed down in February, 1915, declared the concentrated feed statute unconstitutional because of a discriminatory clause in the act. Realizing the importance of this measure to consumers of stock feeds, I sought to have the last legislature remedy the defect by an amendment. The agricultural committee of the house made a favorable report on the amendment, but the rules committee chloroformed the bill.

After the adjournment of the legislature, I took the matter up with the attorney general's office and was advised that I could afford some relief by enforcing purity of stock feeds under the general pure food law. I issued a general bulletin on March 22, 1915, notifying manufacturers and consumers of stock feeds that the division would enforce the regulations on this subject under the food law.

The manufacturers and dealers generally have shown a very commendable disposition to comply with the regulations contained in that bulletin. We have since then been submitting feed samples for analysis to the state chemists. There has been a steady and pronounced improvement in the stock feeds now being sold.

The constantly increasing price of all valuable materials that enter into the manufacture of stock feeds has brought into use many by-products that were formerly wasted or which were used in their crude state. I recognize their necessity and that their legitimate use is right and proper, but there does not now exist nor should there ever be any necessity for their substitution for the original and nutritious products unless the purchaser has reliable information of their

true character. The only fair and honest way to give this information is to have it plainly marked and described on the label or package.

A few manufacturers of stock feeds resort to the very questionable practice of using misleading terms for the purpose of marketing their by-products and adopt such legends as "dairy feed," "dairy chop," "oat feed," "oat clippings," and "oat by-product," to describe oat hulls, rice hulls, cottonseed hulls, ground corncobs, ground alfalfa, weed seeds, grain screenings, chaff, etc. Then again we find a few manufacturers resorting to the very questionable practice of using very small quantities of some desirable feeding stuffs in their mixtures in order that they may declare their presence on their labels, sacks and invoices, for the purpose of inducing patrons to purchase the feed. This practice is bad policy and is deplored and condemned by reputable manufacturers. Such practices are a violation of the spirit of the law and border closely on a violation of the letter of the law and are bound to hasten the day for the requirement on the label and sacks of the percentage of each and every ingredient in mixed feeds.

While this report is being prepared, I have asked for a meeting of manufacturers, their representatives and dealers in stock feeds, with our state chemists and myself to discuss these matters and lay before them the urgent necessity for co-operation in eliminating these abuses. In any event, I shall urge as a correction, an amendment to the law.

FERTILIZERS.

During the biennium, we gathered and submitted for analysis 207 samples of fertilizers and collected fees for the same amounting to \$1,612.00. The law authorizes the publication of the results of the analysis made. Failure of the legislature to provide the necessary printing fund is the reason that no such publication has been made.

Notwithstanding no publication of the analyses has been made, it is not only just to the division but also to the manufacturers and patrons of fertilizers to state that with few exceptions the spirit and letter of the law are being complied with and only in a few instances were even technical violations discovered. Letters calling attention to the same were promptly acknowledged, with the assurance that the deficiencies would be remedied at once. The patrons of fertilizers suffered a loss in the failure to provide for a bulletin, as they were deprived of valuable information from the use of the same. The scarcity and high price of potash has driven out many brands of mixed fertilizers.

DRUGS.

The drug inspector during the biennium has made 2,076 careful inspections of drug stores, hospitals, doctors' offices, and soft drink stands. His personal report together with brief tabulated reports will be found in connection with the division reports and any extended notice here would be only duplicating the same.

OILS.

The report of the chief oil inspector will be found among the statistical reports with his comments. The report is quite complete and demonstrates that the inspectors have been diligent in protecting the state's interests. The inspector's comments give a brief history of the action brought by the Standard Oil Company attacking the constitutionality of the law pertaining to the collection of fees for oil inspection. The case is now pending on appeal in the state supreme court.

BAKERIES.

During the period covered by this report there were 647 thorough bakery inspections made. These inspections covered condition and quality of materials used, cleanliness and health of employees, and sanitary conditions of all buildings, utensils, walls, floors, sinks, store-rooms, and toilets. No certificates were recommended or issued unless conditions at the time justified them. Whenever reinspections were made and they showed the conditions were below the standard demanded, if a certificate had been issued, its surrender was demanded and obtained. While this penalty secured some good results, I am free to admit there were some who paid no attention to its loss. There are some violators of sanitary conditions that can only be reached through the enactment and vigorous enforcement of a comprehensive and effective sanitary statute. We have no such statute now and our power to enforce adequate sanitary regulations is thereby seriously crippled.

STATE INSTITUTIONS.

In connection with our regular duties I have sought to personally inspect all of our state institutions once a year. These inspections disclosed such a commendable condition not only as to food supplies but as to cleanliness also that I was prompted to send a report covering this subject to the State Board of Control. The report was as follows:

OLYMPIA, WASHINGTON, Jan. 16, 1915.

To the Honorable Members of the State Board of Control, Capitol Building,

GENTLEMEN: Feeling that you are deeply interested in the condition of the food supply of the various state institutions, this report is respectfully submitted for your information and consideration.

During the month of December, 1914, and the early part of this month, as occasion permitted in connection with our regular work, we made a general and careful inspection of the food supplies, together with their sanitary surroundings and preparation, of the following institutions:—Northern Hospital for Insane at Sedro Woolley; Reformatory at Monroe; Washington Veterans' Home at Port Orchard; State Soldiers' Home at Orting; Western Hospital for Insane at Fort Steilacoom; Eastern Hospital for Insane at Medical Lake; State School for Deaf, and State School for Blind at Vancouver; State Training School at Chelalis; State School for Girls at Grand Mound, and State Penitentiary at Walla Walla. The food supplies at all of these institutions were in excellent condition as to care and quality, with the exception of some canned pears at the State School for Deaf that had started to spoil, a small quantity of lard at the State Soldiers' Home at Orting, which upon analysis, proved to be below standard, and a small bin of barley at the Reformatory, which upon examination, proved to be infested with weevils.

We also made a careful examination as to the cleanliness of all cupboards, bins, store rooms, refrigerators, dishwashing sinks, dairy and bakery utensils and all implements used in the preparation and serving of food. We made a careful sanitary survey of the slaughter houses (where there were any), dairy barns, poultry buildings and runs, piggeries and yards.

With the exception of a little carelessness in the cleaning of some butcher tools, a bread mixer and some baking tins, to which the attention of the superintendent or commissary accompanying us at the time was called, we found the conditions as to cleanliness far above the average encountered in our daily inspection work of private institutions.

The piggeries at Medical Lake, Steilacoom, Walla Walla and Chehalis are ideal, and while some class them as pig pens, they are so modern that they are entitled to be classed as pig parks, and the porkers look so clean and wholesome that one of our inspection force said they looked good enough to eat with the bristles on.

The dairy barns at Medical Lake, Steilacoom, Walla Walla and Chehalis are modern and kept clean and in fine condition. The dairy barn and piggery at Sedro Woolley, while kept as clean as their old and tumbled-down condition will permit, could not be passed as sanitary. New farm buildings are sadly needed there. The dairy barn at Monroe is under the horse barn, and while the dairy part of the barn is concrete and modern in other particulars, there are some sources of danger that will increase, for the reason that the floor of the horse barn above is made of wood. There is grave danger of seepage. I would suggest coating the wood with some impermeable material.

Special sanitary precautions should be exercised not only in the production but care of milk, as it is one of the most active conveyors of disease among our food products.

We carefully enquired about the physical condition of the various food animals and were pleased to be assured that with two exceptions, the animals in which were under careful observation and care, they were all in a healthful condition.

While the slaughter house at Steilacoom is kept in first class condition, the hide and tankage rooms should be separated from the killing room by partition walls and outside ventilation provided.

We were received courteously and every possible facility was shown us in making our inspections, and our advice was not only welcomed but actively sought on many questions of sanitation and care of foods by the various officers who accompanied us in our inspections.

In a few instances we were informed by officials that, had they known we were coming, they would have been ready for us. We assured them our policy was to come unheralded and that we preferred to meet them in their every day clothes.

In conclusion I believe that I would be remiss in my duty if I did not take this opportunity officially and personally to congratulate you and through you the officials who are responsible for the excellent conditions existing in connection with the food supplies of our state institutions. It demonstrates such a commendable, conscientious and humanitarian discharge of duty that it makes us feel proud of our state and the present administration of its public institutions.

The general conditions are so far superior to what we frequently discover among public purveyors and caterers of food in our daily rounds that they are specially worthy of mention.

Yours very truly,

J. J. HIGGINS.

SANITATION.

Notwithstanding the fact that we have been seriously handicapped through lack of a proper statute, we have invariably given close atten-

tion to and sought to promote sanitation and cleanliness in all places inspected. Realizing the importance to the people of the state of clean as well as pure food, we have endeavored to make the best use of the force and statutes at our command.

FAILURE TO SECURE LEGISLATION.

I very sincerely regret to inform you that none of the four measures submitted by this division to the last legislature was favorably acted upon. The two bills submitted to the senate received favorable action by that body. All the bills were favorably reported upon by the house committees to which they were referred, only to be finally chloroformed by the house rules committee.

INSPECTORS.

While our force of food and drug inspectors has been inadequate to cover all the ground, by using deputies in other branches of the work to assist in food and drug inspection and by devoting considerable time myself to this work, we have managed to cover much of the necessary ground, but anything like reasonable service to the state demands at least one additional food inspector.

While on this subject, I desire to bring to your attention the faithful and efficient services of the inspectors. They have been, in most instances, capable of determining by their own examination of the product whether it complied with the requirements of the law. Therefore but a relatively small percentage of the foods and drugs condemned and destroyed were sent to the state chemists for analysis. A casual perusal of the tabulated statements of the work done but inadequately conveys a just conception of their actual duties.

Their principal business is looking for trouble, and naturally, as the reports show, they found quite a lot of it. The inspectors, to be successful, must have the ability to thoroughly familiarize themselves with the actual conditions as they exist and explain the law's requirements. They must be firm but courteous, and when possible gain and maintain the respect of the inspected party.

It is a great pleasure to me to be able to commend not only the faithful and intelligent efforts of my inspection force, but also to recognize the loyal, helpful, and expert work of our state chemists. I feel I would be remiss in my duty if I did not publicly express my grateful acknowledgment not only for the help they have given me in conscientious discharge of their duties, but as well for their intelligent initiative in matters having for their object the promotion of the work of the division for the greater benefit of the people.

.KILLED WHILE IN DISCHARGE OF STATE DUTIES.

It is with deep and sincere regret that I mention the loss to the division, as well as to the state, of Professor Elton Fulmer, one of the state chemists, and I. J. Minnick, an inspector, who were both

killed in a railroad collision at Cheney, Wash., on February 20, 1916, while returning from the discharge of their duties in connection with a pure food prosecution at Walla Walla, the day previous.

Professor Fulmer had been actively and continuously connected with the pure food work of the state from its beginning in 1894 until he met his untimely end. To his foresight and initiative can be credited many of the improvements in pure food regulation, not only in the state but in the United States as well. He was generally recognized as one of the most capable and able instructors and chemists in the country, and as a man of strong convictions and rugged and unflinching honesty. His untimely end was generally regretted and mourned.

Mr. Minnick was connected with the State Department of Agriculture from its organization, and had been with this division less than a year at the time of his death. He was a man of unquestionable integrity and a faithful and capable inspector. His uniform courtesy and genial manners made friends of all with whom he came in contact.

NEEDED LEGISLATION.

In calling attention to needed legislation, I will not attempt to give a detailed outline of the legislative measures or an elaborate explanation of their need. I will briefly name the measures and make a short statement of what appears from my experience to be the principal necessity for their enactment.

AMENDMENTS TO FOOD AND DRUG ACT.

The present law is so general in most of its requirements that it is impossible to bring about some needed reforms. It should be so amended as to give the enforcing officers power to lay down rules and regulations establishing certain standards for various products that need standardizing. Our state supreme court has ruled that where such authority is given by the legislature it is legal and binding. The weights and measures clause of the food law should be amended to conform with the federal act. The drug section should be amended so as to include the Shirley amendment of the national food and drug act, which reads as follows:

"An article shall be deemed to be misbranded, in the case of drugs, if its package or label shall bear or contain any statement, design or device regarding the curative or therapeutic effect of such article or any of the ingredients or substances contained therein, which is false or fraudulent." Our present food and drug law was a practical duplicate of the federal law at the time of its adoption, and these amendments are in line with further uniformity.

GENERAL SANITATION.

One of the state's most imperative needs is the enactment of a comprehensive sanitary law. Cleanliness is the foundation principle for the safeguarding of life and health. The battle for pure food has

made great progress in the past twenty-five years, but its teammate, cleanliness, has been sadly neglected. A great many of our foods that are chemically pure are sanitarily unfit to eat. In brief the best and purest foods may become and often do become so contaminated by filthy surroundings and handling that they are often more dangerous than the vilest adulterations that prospered in the balmy days prior to pure food legislation. The sanitary laws of Indiana, Colorado, Illinois, Kansas and Iowa are suggested and recommended as suitable models for a Washington statute. The enforcement of a sanitary law can be conducted by the food and drug inspectors without any substantial increase in expense.

SLAUGHTER HOUSES.

There is serious and urgent need of a law giving the State Department of Agriculture supervision over slaughter houses in this state. This measure should empower the Department to lay down strict sanitary regulations and be enforced under a license system that would produce sufficient revenue to carry the expense of its enforcement. Present conditions in many of the slaughter houses in the small communities are vile and insanitary beyond description. In many instances the houses are located on the banks of small streams or creeks. Frequently the offal is thrown in these streams and then water for washing the meat is dipped from this foul source. Practically the only washing meat gets it receives at the slaughter houses. Cattle and hogs suffering from various stages of tuberculosis are not infrequently slaughtered for public consumption at these places. Food animals suffering from all manner of diseases are slaughtered and shipped to the towns and to various cities that are not protected by local inspection laws. The floors, walls, tables, and tools used at these slaughter houses show but little evidence of the use of water. The yards, pens, and runways are seldom cleaned. Blood and manure are caked on the walls and floors. One butcher was asked what they did with sick and injured animals. He smiled and answered, "What do they all do with them?"

The federal authorities thoroughly inspect all animals slaughtered for interstate business as well as the surroundings and slaughter houses. If the government deems such work a necessary health precaution for interstate business, why should our local and rural slaughter houses be allowed to run as they see fit?

REGULATING THE SALE OF EGGS.

The last legislature passed an act classifying and regulating the labeling and marking of eggs. The statute upon legal test has been found faulty in many particulars. California and Oregon legislatures passed statutes of similar nature and the supreme courts in those states have declared those statutes unconstitutional. I have caused several arrests under our state statute and two of the cases are now pending on appeal. There is no question that legislation regulating the sale of eggs is desirable and necessary. We will be pleased to

give the friends of this class of legislation the benefit of our experience in remedying the defects in the present statute.

COLD STORAGE.

There is great need of regulation of cold storage. During the biennium we have found large quantities of cold storage products that had been held for upwards of two years and when discovered were in an absolutely dangerous condition. The owners were prosecuted and fined.

Many states have in successful operation statutes relating to cold storage. The effect of those statutes is often to induce storage plant owners to hold such products close to the time limit and then ship them to states not similarly protected. The question of proper cold storage control is absorbing the attention of food officials and the public today as never before. Cold storage is an economic necessity. It is not the use but the abuse of cold storage that legislation should seek to correct. There is a limitation to the life and wholesomeness of cold storage food. Speculation in food supplies is being permitted in many instances to overwork the economic value of cold storage. This measure should be enforced under a license system.

In the matter of needed legislation I have sought to recommend only such matters as my experience has taught me to believe absolutely necessary, and that combine two essentials, namely: the greatest good to the greatest number, and the least possible expense in their enforcement. I earnestly urge their consideration and adoption. I have now in course of preparation bills covering each of them.

COMPENSATION FOR CHEMISTS.

In justice to the state chemists they should receive some compensation for their state food and drug analytical duties. The work frequently requires their attention on Saturdays and during vacation periods, as well as burden of irregular hours when rendering services as expert witnesses.

DIVISION BULLETINS.

During the biennium we have issued a number of bulletins relating to foods and feeds. This is by far the most economical method of bringing to the manufacturers, merchants, and the public such information as is a necessary guide and assistance in the enforcement of the various acts. The reason more work of that nature has not been done is the lack of a sufficient printing fund.

BRIEF STATISTICAL REPORTS.

On account of the limited printing fund, only brief statistical reports of the various acts enforced under this division will accompany this report. The detailed inspection reports are on file in the Department and can be consulted by the public at any time.

Very respectfully submitted,

J. J. HIGGINS,

Ass't. Commissioner in Charge of the Fourth Division.

FOODS CONDEMNED AND DESTROYED.

Canned Goods.	Cans
Asparagus	12
Beans	91
Salmon	66,634
Halibut	13
Crab Meat.....	54
Herring	86
Sardines	70
Clams	25
Fish, miscellaneous kinds.....	111
Meats	912
Poultry	153
Soup	34
Fruit	2,304
Sauer Kraut	56
Pumpkin	44
Clam Nectar	247
Condensed milk	194
Total.....	71,040

Bottle Goods.	Bottles
Catsup	1,523
Pickles	659
Olives	411
Salad dressing	291
Distilled vinegar	84
Horse radish	64
Jams	8
Extracts	406
Pepper sauce	28
Worcester sauce	27
Chili sauce	2
Mustard	230
Peanut butter	42
Total.....	3,775

Package Goods.	Packages
Breakfast cereals	179
Miscellaneous food packages.....	9,235
Dried currants	239
Baking powder	356
Total.....	10,009

Bulk Products.	Pounds
Dry codfish	16,800
Brick codfish	278
Frozen Salmon	14,500
Frozen Halibut	8,350
Salt salmon	1,220
Assorted Frozen fish.....	1,100
Frozen Finnan haddie	630
Salt herring	600
Boiled crabs	653
Fresh beef, liver and sausage.....	2,785
Salt pork	90
Ham and bacon.....	86 $\frac{3}{4}$
Lard	22
Dressed turkeys	2,608
Dressed chickens	7,659
Squabs	840
Dressed ducks	60
Corn starch	2,000
Soda	200
Shredded cocoanut	700
Walnuts	2,073
Peanuts	222,940
Total.....	286,194 $\frac{3}{4}$

Eggs.	Dozen
Cold storage and Chinese eggs	15,353

FOOD SAMPLES ANALYZED.

Kind	Findings	Total
Alcohol (Grain)	2 Legal	2
Alcohol (Wood)	1 Illegal	1
Baking powder	22 Legal	
Baking powder	2 Illegal	24
Catsup	6 Legal	
Catsup	5 Illegal	11
Candy	3 Legal	3
Cider	2 Legal	2
Clams	1 Legal	
Clams	1 Illegal	2
Cocoa	15 Legal	15
Chocolate (ground)	7 Legal	7
Codfish	2 Legal	
Codfish	2 Illegal	4
Crab	7 Illegal	7
Dressing (salad)	4 Legal	
Dressing	1 Illegal	
Dressing	1 Doubtful	6
Extracts	54 Legal	
Extracts	18 Illegal	
Extracts	3 Doubtful	75
Eggs	5 Legal	
Eggs	5 Illegal	10
Flour	3 Legal	
Flour	22 Illegal	25
Fruitene	1 Legal	1
Grapefruit	1 Legal	
Grapefruit	4 Illegal	5
Hamburger	2 Legal	
Hamburger	2 Illegal	4
Honey	18 Legal	18
Horseradish	1 Legal	1
Ice cream powder	1 Legal	1
Jelly	58 Legal	
Jelly	2 Illegal	60
Jam	2 Legal	
Jam	3 Illegal	5
Lard	3 Legal	
Lard	1 Illegal	
Lard	1 Doubtful	5
Meat (fresh)	1 Legal	
Meat (mince)	1 Illegal	2
Chickens (cold storage)	5 Illegal	5
Turkeys (cold storage)	4 Illegal	4
Squab (cold storage)	2 Illegal	2
Milk (condensed)	11 Legal	
Milk (condensed)	12 Below standard	23
Oranges	1 Legal	1
Olive oil	14 Legal	14
Oil (salad)	1 Illegal	1
Peanuts	1 Illegal	1
Pickles (dill)	1 Legal	1
Preserves	1 Legal	
Preserves	2 Doubtful	3
Rice	1 Illegal	1
Salmon	20 Legal	
Salmon	46 Illegal	
Salmon	38 Doubtful	104
Sausage	1 Legal	1
Sauces (condiment)	2 Legal	2
Soups	2 Legal	2
Syrup	23 Legal	
Syrup	6 Illegal	29
Sugar (maple)	2 Legal	2
Vinegar	49 Legal	
Vinegar	41 Doubtful	
Vinegar	11 Illegal	101
Water (mineral)	1 Legal	1
Walnuts	3 Legal	
Walnuts	1 Illegal	4
Whiskey	2 Legal	2
Wine (Port)	2 Legal	2
Total		602

STOCK FEEDS ANALYZED.

Stock feeds	85	Legal	
Stock feeds	35	Illegal	
Stock feeds	3	Legal unofficial	
Stock feeds	6	Misbranded	
Stock feeds	3	Doubtful	132

FOOD PROSECUTIONS.

- No. 570—State of Washington vs. Cudahy Packing Co. Charge: Having in possession adulterated poultry. Fined \$250 and costs. Paid.
- No. 571—State of Washington vs. Western Meat & Fish Co. Charge: Having in possession adulterated poultry. Plead guilty. Fined \$100 and costs. Paid.
- No. 572—State of Washington vs. Morris & Company. Charge: Having in possession adulterated poultry. Fined \$250 and costs. Paid.
- No. 2507—State of Washington vs. General Market Co. Charge: Having in possession adulterated food. Canned salmon. Fined \$100 and costs. Paid.
- No. 2508—State of Washington vs. General Market Co. Charge: Misbranding food products. Canned salmon. Fined \$50 and costs. Paid.
- No. 2506—State of Washington vs. Christian Querin. Charge: Selling adulterated food. Canned salmon. Fined \$250 and costs, appealed and settled in Superior Court. Fine Paid.
- No. 2506—State of Washington vs. James Harris. Charge: Selling adulterated food. Canned salmon. Fined \$100 without cost. Paid.
- No.—State of Washington vs. Everybody's Market. Charge: Selling misbranded goods. Fined \$10 and costs. Paid.
- No. 2856—State of Washington vs. Oscar Lucks. Charge: Selling adulterated food. Fined \$50 and costs. Paid.
- No. 2857—State of Washington vs. Chas. W. Treve. Charge: Selling misbranded butter. Fined \$25 without costs. Paid.
- No. 2858—State of Washington vs. Johnson, Lieber & Van Bokkelen. Charge: Selling adulterated food. Fined \$50 and costs. Paid.
- No. 2987.—State of Washington vs. Rhodes Brothers. Charge: Selling misbranded extracts. Plead guilty. Fined \$25 and costs. Paid.
- No. 120—State of Washington vs. L. B. Meredith. Charge: Selling misbranded butter. Filed bond in the sum of \$25 and forfeited same.
- No. 121—State of Washington vs. H. E. Dahlin. Charge: Selling misbranded butter. Filed bond in the sum of \$25 and forfeited same.
- No. 23—State of Washington vs. E. Rassmussen. Charge: Selling adulterated food. Fined \$25 and costs. Paid.
- No. 151—State of Washington vs. Walter Burton. Charge: Selling adulterated food. Fined \$25 and costs. Paid.
- No.—State of Washington vs. Wm. Leo, Jr., Charge: Selling adulterated vinegar. Fined \$25 and costs. Paid.
- No.—State of Washington vs. Tacoma Meat Co. Charge: Selling misbranded lard. Case dismissed by prosecutor because defendants were in bankruptcy.
- No.—State of Washington vs. C. C. Irwin. Charge: Selling misbranded lard. Acquitted.
- No.—State of Washington vs. Pacific Oil Mills Co. Charge: Selling adulterated peanuts. Case pending in Superior Court.
- No. 3337—State of Washington vs. J. P. Marshall. Charge: Selling adulterated vinegar. Plead guilty. Fined \$25 without costs. Paid.

- No. 3496—State of Washington vs. Geo. O. Brehm. Charge: Selling storage eggs without properly branding same. Fined \$5 and costs. Paid.
- No. 3495—State of Washington vs. John Layton & Co., and Geo. L. Jones. Charge: Selling Chinese eggs without properly branding same. Case pending on appeal.
- No. 4116—State of Washington vs. Hemphill Bros. Charge: Having adulterated food in possession. Plead guilty. Fined \$50 without costs. Case pending on appeal.
- No. 4151—State of Washington vs. McRae & Branigan. Charge: Having adulterated food in possession. Plead guilty. Fined \$25 without costs. Paid.
- No. 4152—State of Washington vs. Augustine & Kyer. Charge: Having adulterated food in possession. Plead guilty. Fined \$25.
- No.—State of Washington vs. Schallinger Produce Co. Charge: Selling adulterated food. Court ordered same destroyed.
- No.—State of Washington vs. Yakima Products Co. Charge: Offering for sale adulterated vinegar. Acquitted.
- No.—State of Washington vs. Harrah Bros. Charge: Having adulterated food in possession. Plead guilty. Fined \$25.

DRUG PROSECUTIONS.

- No. 4132—State of Washington vs. Fred Heipp. Charge: Selling misbranded hair tonic. Case dismissed by Prosecutor Lundin without state's approval.
- No. 3661. State of Washington vs. G. H. Guy. Charge: Selling misbranded salad oil. Plead guilty. Fined \$25 without costs. Paid.
- No.—State of Washington vs. Edwin Clark. Charge: Selling misbranded cough syrup. Fined \$25 and costs. Paid.

BAKERY INSPECTION.

Bakeries Inspected:

Graded as very good	19
Graded as good	226
Graded as fair	181
Graded as poor	68
Reinspections	159

Total inspections653

Certificates issued245

Certificates withheld because shops do not meet requirements249

Total.....494

Number of towns visited on inspection trips119

Towns visited and inspections made in each town:

BAKERY INSPECTIONS.

Aberdeen	7	Chehalis	7
Auburn	5	Cheney	2
Arlington	2	Centralla	11
Anacortes	5	Chewelah	12
Bellingham	22	Colville	12
Burlington	3	Colfax	12
Bremerton	7	Concrete	1
Buckley	2	Castle Rock	2
Bismarck	2	Camas	4
Blaine	2	Cle Elum	3
Black Diamond	2	Carson	1
Bothell	1	Cathlamet	1
Cashmere	1	Chelan	2

Clear Lake	1	Port Angeles	4
Dayton	2	Port Orchard	2
Davenport	2	Port Townsend	4
Everett	14	Prosser	2
Endicott	1	Pullman	2
Ephrata	1	Puyallup	4
Ellensburg	2	Raymond	2
Elma	2	Renton	4
Enumclaw	2	Ritzville	1
Edmonds	2	Rosalia	1
Ferndale	2	Roslyn	2
Fern Hill	1	Seattle	148
Garfield	1	Seaview	1
Granite Falls	1	Sedro Woolley	4
Gold Bar	1	Sequim	3
Goldendale	2	Shelton	1
Hillyard	1	Snohomish	3
Hoquiam	4	South Bend	2
Hartford	1	Spangle	1
Ilwaco	2	Sprague	1
Issaquah	2	Spokane	35
Index	1	Stanwood	2
Kalama	1	Stevenson	2
Kelso	3	St. Helens	1
Kennewick	1	Sultan	1
Kent	1	Sumner	4
Kapowsin	1	Sumas	1
La Conner	2	Sunnyside	1
Leavenworth	1	Tacoma	62
Lynden	1	Tekoa	1
Mabton	1	Tenino	1
Marcus	1	Toledo	1
Marysville	1	Tolt	1
Monroe	1	Toppenish	2
Montesano	1	Vader	1
Mount Vernon	7	Valley	1
Newport	1	Vancouver	2
North Yakima	4	Waitsburg	2
Oakesdale	2	Walla Walla	4
Odessa	1	Washougal	2
Okanogan	1	Washtucna	1
Olympia	5	Wenatchee	2
Oroville	1	White Salmon	2
Orting	1	Wilkeson	2
Palouse	3	Winlock	3
Parkland	1	Yacolt	1
Pasco	1		
			Total.....522

Many shops of the type of "home bakeries" which were too small to be classed as regular bake shops were also inspected by this division.

In practically all of the shops where needed improvements were ordered made, a reinspection has revealed a marked improvement in the shop conditions.

The bakery inspector also acted in the capacity of assistant food inspector, and in addition to the 522 bake shops inspected, has inspected 4,582 food distributing establishments of various kinds other than bakeries.

DRUGS.

Official Samples Taken and Analyzed.

<i>Kind</i>	<i>No.</i>	<i>Findings</i>
Alcohol	1	Legal
Corn remedy	1	Illegal
Colic cure	1	Legal
Spirits camphor	1	Legal
Tinc. Iodine	12	Legal
Tinc. Iodine	8	Illegal
Extract lemon	1	Legal

<i>Kind</i>	<i>No.</i>	<i>Findings</i>
Dyspepsia remedies	1.....	Legal
Essence peppermint.....	1.....	Legal
Spirits nitre	2.....	Legal
Spirits nitre	1.....	Illegal
Headache remedy	4.....	Legal
Headache remedy	1.....	Illegal
Cough remedies	6.....	Legal
Cough remedies	1.....	Illegal
Cold remedies	1.....	Legal
Carbolic acid	2.....	Legal
Sweet oil	1.....	Legal
Salad oil	1.....	Illegal
Catarrh cure	1.....	Legal
Oil wintergreen	1.....	Legal
Peroxide hydrogen	2.....	Legal
Hair tonic	1.....	Illegal
Soda water	3.....	Illegal
Total	55	

DRUGS.

Goods Destroyed and Walvers Taken.

	<i>Packages</i>
Elixirs	27
Fluid extracts	89
Pharmaceuticals	101
Syrups	22
Tinctures	84
Cold and grippe cures	306
Catarrh cures	264
Cough cures	1,127
Colic cures	400
Blood cures	327
Corn cures	10
Children remedies	255
Dyspepsia cures	208
Fever cures	77
Headache cures	266
Kidney cures	454
Laxatives	265
Linaments	34
Medicinal oils	16
Rheumatic oils	201
Salves	61
Tonics	500
Toothache cures	15
Finer chemicals	72
Heavy drugs	46
Tablets, filled capsules, etc.....	43
Earache medicines	7
Total.....	5,277
Cotton absorbent	43 Lbs.
Bandages	20 "

FERTILIZERS.

Official Samples Taken and Analyzed.

Anacortes	6
Bellingham	24
Everett	2
Portland, Oregon.....	40
Seattle	60
Spokane	40
North Yakima	7
Tacoma	8
Walla Walla	6
Vancouver	12
Total.....	205

ANALYTICAL FEES FOR FERTILIZERS COLLECTED.

Aabling-Boyce Co., Seattle	\$36 00
American Pacific Whaling Co., Bay City....	48 00
Balfour Guthrie Co., Seattle.....	48 00
S. Blachley, Colton.....	18 00
Carstens Packing Co., Tacoma.....	120 00
Empire Packing Co., Spokane.....	72 00
Frye & Company, Seattle.....	30 00
W. R. Grace & Co., Seattle.....	8 00
James Henry, Seattle.....	36 00
Idaho Lime Co., Spokane.....	18 00
Inland Seed Co., Spokane	18 00
Jacob Kaufman, Spokane	36 00
Chas. H. Lilly Co., Seattle.....	288 00
National Potash and Iodine Co., Bremerton..	18 00
Portland Seed Co., Portland.....	258 00
Nitrate Agencies Co., Seattle.....	6 00
Robinson Fisheries Co., Anacortes.....	24 00
Russia Cement Co., Anacortes.....	24 00
E. H. Stanton Co., Spokane.....	60 00
Seattle Seed Co., Seattle.....	24 00
Sylvester Brothers, Victoria, B. C.....	10 00
Union Meat Co., Portland, Ore.....	308 00
Walla Walla Meat Co., Walla Walla.....	60 00
Western Fertilizer Co., San Francisco, Cal..	36 00
Yakima Meat Co., North Yakima.....	12 00

Total.....\$1,612 00

REPORT OF DRUG INSPECTOR.

J. J. Higgins, Olympia, Washington.

Dear Sir: I submit a report of my work during the past two years, starting August 15, 1914, and ending July 31, 1916.

We have tried to reach every drug store and place where drugs are sold throughout the state, and excepting some general stores in isolated places, and of which we have no record, have done so at least once—some twice—and in the cities and where special reasons demanded, as many as four times each year.

At the time the present inspector started, there were upon the shelves of stores, several thousand bottles and packages of so-called patent medicines, which were all misbranded and many spoiled at the time the pure food and drug act took effect. These preparations were all put up in wrapped packages or cartons, making it very difficult to ascertain the condition of the medicine without destroying the package. However, the law gives each dealer the right to dispose of such in the ordinary course of trade. Some of them were upon the shelves as far back as 1898, and had become eye sores, and instead of trying to dispose of them, shoved them to the back of the shelves. Your inspector took the view that in so far as no reasonable effort had been made to dispose of them, they would stay for many more years.

Many stores had changed owners two and even more times and a few of the new owners were even trying to obtain new labels and wrappers to hide the age and then offer for sale or ship out of the state. As many of our poor are compelled to depend upon these prepared remedies, your inspector deemed eight years a reasonable time in which to have disposed of them. I opened many packages and

found those containing volatile substances to have shrunk by evaporation, thus spoiling the entire package, or making the dose stronger, which in some cases was very dangerous..

From this showing of condition I have condemned and destroyed a large number of packages. This in many cases was a heavy loss to the druggist and shop keeper, but nearly all willingly gave them up. There are yet a few stores which have some such packages on hand, which they decline to destroy, but we are keeping a watch on them and will destroy them as soon as we find they violate the law.

As the drug stores carried most of the drugs, former inspectors paid most attention to them, until they were in very fair condition, but had not reached the country merchant on the cross roads who also carried drugs to supply the neighboring farmers and the country doctor when he came by. We have tried to reach this class of stores and during the past year have located and inspected about four hundred and taught them how to keep their drugs. We also have reached as many doctors' offices as we could find time, as some of them carry their own supply of drugs and with their limited knowledge of such are an easy victim of the smooth salesman who sells an inferior line. Some were kept in the most horrible condition, and were passed out indiscriminately and no record or prescription made of such sale whereby we or the patient could know if they were getting harmful drugs or not.

By courtesy of the state board of pharmacy, who made your inspector a deputy of their board, he was able to insist that such conditions be remedied and a proper record kept. While your department gets no particular credit for it, we have been able to furnish to the board a list of these shop keepers who sell drugs and enable them to collect the six-dollar license fee charged.

The State of Washington has thereby profited by many thousands of dollars annually by our work and the Department of Agriculture should receive some credit for the same. I believe all such license money should be paid through this Department, as we are the only ones giving the dealers any benefit from our inspections.

Wherever time would permit, I have visited soft drink establishments and caused owners to clean up their floors, fountains, glasses in which drinks are served, and taught them how to keep their fruits and syrups in clean and sanitary conditions, and have forced manufacturers to label artificial drinks on the sides of bottles instead of the caps which are removed when sold to the customer.

I have inspected every hospital, whether public or private, which I could find, and have insisted upon them keeping their drugs in a fresh, clean condition so the patient was sure of getting pure drugs.

We have had several bad fires in stores or near them so that stocks of drugs were saturated with dirty water. It has taken considerable time to go over each package and ascertain if they came in contact with filth or whether the water mixed with chemicals had changed the preparation into another compound or lessened the

strength of it. This work does not show up for the time expended, and every food and drug establishment should be compelled by law to report to the Department every fire in their establishment, so an inspector could look over the stock before it is again offered for sale.

I find the lack of a sanitary law a very heavy drawback, as places where the stocks are chemically pure are sometimes in a very filthy condition.

I also find I very often waste as much as six and eight hours sitting on a depot platform waiting for trains which could be utilized to very much better advantage, and believe the legislature should supply automobiles to all inspectors the same as most all wholesale houses do their men; if it is cheap for them, it surely should be cheap for the state.

We have taken samples of various kinds of preparations and have made analysis of same and find that more care is being used in the manufacture of preparations, and by cautioning the dealers to make only an amount which would last a short time, there would be less liability of change from temperature and light, as in most every illegal sample the discrepancy was caused by temperature.

Respectfully submitted,

E. L. JONES,

Drug Inspector.

OIL INSPECTOR'S REPORT.

In submitting to you our second biennial report, you will note we date from July 1, 1914, to June 30, 1916.

During these months we have endeavored to secure inspections of all the oils shipped to the state under our jurisdiction and enforce the law pertaining thereto. We have not found this a difficult task, since there is a better understanding upon the part of oil vendors relative to inspections and the reasons therefor. We have with great care urged the matter of proper labeling and branding of barrels, packages and all other receptacles as provided according to law, so that this part of the work has been very satisfactorily done.

Two years ago we called your attention to a handicap relative to certain weaknesses of the law under which we were operating. We noted then as now, that while we have a minimum of Fahrenheit degree for illuminating oils there is no provision for a maximum, and that there is no standard of Baume for gasoline, benzine and distillate. While it is our duty to inspect these products for gravity, we are compelled to issue a certificate of inspection regardless of what we find. It is true, however, we have some recourse in the matter of branding the same and requiring the dealer to sell according to the gravity given by the oil inspector.

In December, 1914, with the assistance of Mr. Charles S. Gleason, an assistant attorney general, we drew up an amendment to the present law strengthening several of the weak points therein, the object of which was to secure for the public a better quality of oils and to require a more careful branding and stamping, as there had

been a number of complaints that poor illuminating oil was being placed upon the market. Several accidents had occurred through a lack of proper labeling of oil and gasoline in cans and other receptacles. In one instance, through the mistake of using gasoline for kerosene in building a fire, the wife and two children lost their lives and the house in which they were living was totally destroyed by fire, and an effort was made in this amended bill to cover all receptacles containing either, by proper labeling, or in case of bottles the using of stickers.

This bill was prepared and placed before the proper committee during the last legislature and was passed out with recommendation for passage. An effort, however, was at this time made upon the part of certain interested parties to also create a law for the inspection of crude oil, commonly called fuel oil, and the committee thereafter, thinking it would be better to insert the inspection of crude oils and by-products into one bill, did so and succeeded by so doing in killing both bills, and, as you are well aware, we have been operating under the old law and the only one ever enacted in the State of Washington. There should be a better and stronger law enacted giving the oil inspector larger scope and a little more power to enforce certain provisions of said law. There should not only be an inspection law for kerosene, gasoline, benzine, and distillate, but also covering the inspection of lubricating oils, Toppings and other by-products of petroleum. Our inspection laws have proved invaluable to the public in general. Our interview with wholesalers relative to these matters has resulted in a better quality of oils now coming into the state than at any other time in recent years. Owing to the high price of gasoline there has been some disposition upon the part of certain dealers to mix the same with distillate, which necessarily makes an inferior quality and, therefore, sells cheaper; but we are glad to report this practice has practically ceased throughout the entire state.

Relative to the enforcement of the law, we have not found it necessary to file complaints for the selling of oils without their first having been inspected, except in one instance and that suit is still pending.

About the first of September, 1915, the Standard Oil Company brought suit against the state attacking the constitutionality of the law pertaining to the collection of fees. In this suit the right of the state to have an inspection law was admitted without question.

The suit was brought first in King county and afterward transferred to Thurston county, and was argued before Judge Wright in November, and the judge overruled the demurrer of the state. The Standard Oil Company wishing to amend its complaint, the case was again argued on February 7, 1916, and on the 24th day of March Judge Wright again overruled the demurrer of the state to the amended complaint. The case has been appealed to the supreme court, and in the meantime your oil inspector is continuing in the

discharge of his duties and inspecting all oils coming into the state, furnishing certificates and keeping as nearly as possible correct record of the same.

In this report you will observe that from September, 1915, to June 30, 1916, we do not include collections of fees from the Standard Oil Company, this company having paid same into the registry of the court, which up to that date amounts to approximately \$43,279.54. All the other companies have gone on as usual and paid their inspection fees, and the amount has passed through the hands of the commissioner into the general fund of the state. Therefore, in our tabulated statement we shall consider the portion of our report relating to the Standard Oil Company as somewhat incomplete, the matter having passed entirely out of our hands, and we have been compelled to depend upon the attorneys of the Standard Oil Company for such gallonage and fees as has been turned into the court, save the fact that we have kept as close a check on the gallonage as has been possible so to do in the existing circumstances.

Below you will find a tabulated statement of gallonage and fees, with the exception of the Standard Oil Company herein mentioned, as taken from our books, the monthly reports of which have been placed in your hands, and, I believe, have so far been found correct. We have endeavored to faithfully discharge our duties, do all the work pertaining thereto with diligence and watchful economy, and feel in submitting this report that nothing has been left undone that we should have attended to, so far as is known to us.

Respectfully submitted,

S. P. WILSON, State Oil Inspector.

**Monthly Oil Inspections, Together With Fees for Inspections, From
July 1, 1914, to June 30, 1916.**

1914.		
	<i>Gallons.</i>	<i>Fees.</i>
July	3,304,375	\$6,608 75
August	3,093,940	6,187 88
September	2,055,930	4,111 86
October	3,874,380	7,748 76
November	3,213,300	6,426 60
December	3,516,335	7,032 67
1915.		
January	1,883,255	3,766 51
February	1,797,690	8,595 38
March	3,038,310	6,076 62
April	4,210,460	8,420 92
May	3,208,580	6,417 16
June	3,839,255	7,678 51
July	2,220,460	4,440 92
August	4,444,730	8,889 46
September	1,458,595	2,917 19
October	867,890	1,670 52
November	1,025,635	2,051 27
December	691,515	1,383 03
1916.		
January	804,930	1,609 86
February	612,615	1,225 23
March	1,005,200	2,010 40
April	1,176,765	2,353 53
May	867,890	1,740 37
June	1,009,173	2,018 34
	<hr/> 53,188,578	<hr/> \$106,377 16

AMOUNT OF INSPECTION FEES DEPOSITED WITH CLERK OF COURT AT OLYMPIA IN SUIT OF STANDARD OIL CO. VS. GRAVES ET AL.

	TACOMA		SPOKANE		SEATTLE		PORTLAND	
	Oil in Gallons	Fee	Oil in Gallons	Fee	Oil in Gallons	Fee	Oil in Gallons	Fee
September, 1915	610,000	\$1,220 00	78,580	\$157 16	2,404,665	\$4,809 33	254,970	\$509 94
October, 1915	292,315	584 63	144,106	288 21	1,567,315	3,134 63	172,826	344 65
November, 1915	464,280	928 56	41,080	82 16	499,010	998 02	178,075	356 15
December, 1915	483,020	966 04	41,020	82 04	417,896	835 79	169,027	338 05
January, 1916	556,866	1,113 73	102,780	205 56	2,062,208	4,124 41	111,210	222 42
February, 1916	447,400	894 80	92,060	184 12	1,459,080	2,918 18	100,790	201 46
March, 1916	508,886	1,016 77	90,455	60 91	997,636	1,995 27	106,535	213 07
April, 1916	301,616	603 25	.....	.....	2,547,796	5,091 47	97,191	194 38
May, 1916 .....	.....	.....	.....	.....	1,218,088	2,436 08	113,250	226 50
June, 1916	625,493	1,250 98	.....	.....	2,284,212	4,568 42	121,213	242 42
Totals.....	4,289,573	\$8,578 74	590,060	\$1,000 16	15,406,804	\$30,811 60	1,414,526	\$2,829 04

Grand Total—Gallons, 21,639,783.
Fees, \$43,279.54.

SEED LABORATORY REPORT

The following is the report of the Seed Laboratory during the past two years, from July 1, 1914, to June 30, 1916, inclusive:

The law provides for:

- (1) The inspection of commercial seed in the markets of this state.
- (2) The enforcement of the law and penalties for violation.
- (3) Proper labeling of agricultural seeds sold in lots of one pound or more.
- (4) That seed offered for sale in this state must be free from the seeds of wild mustard or Charlock, quack grass, Canada thistle, wild oats, dodder, and corn cockle.
- (5) The free testing of seeds for any resident of the state who is going to use the seed himself.

OFFICIAL INSPECTIONS.

The number of inspections made in the past two years during the seed season were five hundred and fifty-two (552). The principal cities and towns of the state, numbering seventy-one (71), have been visited and all seed markets inspected.

In most cases the seed dealers are very kindly disposed to the inspection of their stock and are glad to know of ways of bettering seed conditions.

Marked improvement is noticeable in the quality of seed carried by dealers. Through the enforcement of the seed law and the increasing demand of farmers for better seed, dealers are forced to carry better grades than a few years previous.

Progressive farmers today are insisting upon seeds of high test, and are also obtaining samples from their dealer to have tested before purchasing, thereby eliminating risk of seed not being as represented.

The greatest difficulty has been experienced with dealers of other states who sell to dealers of this state. Whenever possible such dealers have been notified that seed shipped into the state by them must comply with the law, and copies of the law have been sent to them. The refusal of seed which does not conform to our standards, by the dealers of the state, has done a great deal to remedy this condition.

Another difficulty, which not only works a hardship on the seed dealer trying to comply with the law, but also is a detriment to better seed conditions, is the fact that farmers, who do not appreciate the value of good seed, are buying seed from their neighbors. The seed as a rule is just as it comes from the field, uncleaned, and contains a large percentage of foul seed. Frequently complaints come in from dealers of certain localities where such conditions exist.

The present law makes no provision for the regulation of such seeds as are sold by the farmer direct to the consumer.

Table No. 1.—Source of Samples, Number and Kind of Test Made.

SAMPLE SENT BY	Number of Samples	Identification	Examination	Purity	Germination	Total Tests
Individuals	134	21	49	64	66	200
Dealers	47	7	20	42	60	126
Inspectors	614	.....	649	133	109	891
Totals.....	795	28	718	239	235	1,220

PROSECUTIONS.

On December 10, 1914, the Chas. H. Lilly Co. were found guilty of violating the pure seed law, having sold alsike clover below the standard of purity. They were required to pay \$100.00 as damages, and to furnish one hundred pounds of new seed to purchaser.

May 29, 1916, State of Washington vs. Aabling & Boyce. Charge. Selling five (5) pounds alfalfa containing dodder. Fined \$10.00 and costs. Paid.

LABELING.

One of the important provisions of the law is that of labeling seed. All seed offered for sale in the state must be labeled either "Standard" in accordance with those set forth by law or with the per cent of purity, specifying the kind and per cent of impurities, provided they are below the standard prescribed by law.

The method of labeling is left with the wholesaler so long as it meets the requirements of the law. Some stencil the sacks; others attach tags to them. A very commendable method which some dealers have adopted is that of sending a duplicate copy of the purity and germination report with the shipment of seeds. These methods are not only good advertising but a great help to the purchaser.

THE SEED LABORATORY.

The Seed Laboratory is equipped with practically the same apparatus that is used in all the seed laboratories of the U. S. Department of Agriculture.

It consists of a seed mixer and sampler, a Sartorius balance, also a Henry Troemner balance, a vertical air-blast separator, a nest of fine perforated brass sieves, two standard germinating chambers. These germinators are equipped with automatic regulators which keep a constant temperature, representing natural conditions as nearly as possible.

The object of the Seed Laboratory is to give correct information concerning seed. If every farmer would make use of the Seed Laboratory and avail himself of the opportunity of having seed tested before using it, dealers would be forced to carry the best grades, and poor seed would be taken from the markets. (Tests are made free of charge for farmers.)

THE SEED LAW.

Washington is one of twenty-seven states having a specific seed law. Others are Idaho, Iowa, Kentucky, Maine, Maryland, Michigan,

Minnesota, Montana, Nebraska, New Jersey, New Hampshire, New York, North Carolina, North Dakota, Ohio, Oregon, Pennsylvania, South Carolina, Tennessee, Vermont, Virginia, West Virginia, Wisconsin, and Wyoming.

All seed analysts connected with the U. S. Department of Agriculture, with any state, agricultural experiment station, or agricultural college are organized into an association which convenes every year. Uniformity of seed methods and ways of bettering seed conditions are discussed at these meetings.

A uniform state seed law is under construction and it is hoped in time that a uniform law as well as uniform methods of testing will be used in all states.

The Washington seed law has been found very applicable in most cases. During the session of legislature in 1915, Section 3055, R. & B., requiring the year in which seed was grown to be plainly marked on each package of vegetable seed, was amended. It was found impossible to enforce it, as seed is contracted from so many growers and so much of it is imported that correct information could not be obtained.

The amended section now applies to the germinable viability of vegetable seed, giving minimum standards for the different species of vegetables. This amendment has proven a success, as it can be complied with by seed merchants.

The seed law protects farmers and other purchasers of seed against poor seeds containing noxious weeds and seeds that are of low vitality. It also provides a protection to the conscientious dealer and enables him to sell better qualities of seed.

SUBMITTING SAMPLES.

Samples of seed submitted to the laboratory for a test should be a fair sample of the lot from which it is taken in order that the results will be accurate and will show the true character of the lot being examined. If the seed is in sacks, bags, or bins, the sample should be taken to represent the top, bottom, and middle of the container. A good handful is large enough for a sample of most seeds.

They should be carefully sealed in an envelope and sent to the Department. A letter should accompany the sample advising kind of test desired, giving name of seed, and the name and address of the sender. Tests are made on the receipt of same and results mailed as soon as possible.

PURITY TESTS.

When a sample of seed is received it is given a laboratory number which marks all recording data and envelopes used in filing this sample of seed. It is then put into the seed mixer and sampler to obtain a representative sample of the lot submitted. The sample is next weighed accurately, after which separations are made by hand and by means of an air-blast separator. A nest of sieves also greatly facilitates a seed test. The separations are then weighed and percentages worked out, giving the per cent of pure seed, per cent of

inert matter, and per cent of foreign seed. The results are placed on the record card. Each lot of foreign seed is correctly named and entered on the card together with the number found. The report sent out to the individual gives the common names of weeds and the approximate number per pound of each weed seed found. Patience and skill are required in identifying the seeds of weeds and commercial plants.

The following table gives the standards set forth in the Washington seed law for grains and forage seeds:

STANDARDS OF PURITY AND VIABILITY OF AGRICULTURAL SEEDS.

<i>Name of Seeds</i>	<i>Per Cent of Purity</i>	<i>Per Cent of Germinable Seeds</i>
Alfalfa (<i>Medicago sativa</i>)	98	80
Barley	98	90
Blue grass, Canadian (<i>Poa compressa</i>)	90	45
Blue grass, Kentucky (<i>Poa paratensis</i>)	80	45
Brome, awnless (<i>Bromus inermis</i>)	90	75
Buckwheat	96	90
Clover, alsike (<i>Trifolium hybridum</i>)	90	75
Clover, crimson (<i>Trifolium incarnatum</i>)	98	85
Clover, red (<i>Trifolium pratense</i>)	92	80
Clover, white (<i>Trifolium repens</i>)	90	75
Corn, field (<i>Zea mays</i>)	99	94
Corn, sweet	99	75
Fescue, meadow (<i>Festuca pratensis</i>)	95	85
Flax (<i>Linum usitatissimum</i>)	96	89
Millet, common (<i>Setaria italica</i>)	90	85
Millet, hog (<i>Panicum miliaceum</i>)	90	85
Millet, pearl (<i>Penisetum typhosdeum</i>)	99	65
Oats (<i>Avena sativa</i>)	98	90
Oat grass, tall (<i>Arrhena therum aven</i>)	72	70
Orchard grass (<i>Dactylis glomerata</i>)	70	70
Rape (<i>Brassica rapa</i>)	99	90
Redtop (<i>Agrostic alba</i>)	90	70
Rye (<i>Secala cereale</i>)	98	90
Rye grass, perennial (<i>Lolium perenne</i>)	96	90
Rye grass, Italian (<i>Lolium italicum</i>)	95	80
Sorghum (<i>Andropogon sorghum</i>)	96	80
Sorghum for fodder	90	60
Timothy (<i>Phleum pratense</i>)	96	85
Wheat (<i>Triticum</i>)	98	90

GERMINATION TESTS.

It is equally as important to know that seeds are of good vitality as to know that they are free from noxious weeds. Seed may be very high in purity and yet be low in germination qualities. A test for germination is therefore necessary. Very often the leguminous seeds, such as alfalfa, red, white and alsike clover, contain a large per cent of hard seeds. They have very hard seed coats which moisture can not penetrate. They remain the same during the entire test. Hard seeds in any amount are disappointing and should be avoided. A good standard is impossible unless the seed all germinates at the same time.

They have the same appearance as good seed. If the seed coat can be scratched in some way they will germinate in the required time.

Simple methods of germinating seed may be used for most seeds in the home. Count one hundred seeds of grain or two hundred of

small seeds, such as the clovers, and place them between double thicknesses of Canton flannel or blotting paper. Put them between dinner plates and keep moist but not wet. Keep in a room of ordinary temperature of about seventy degrees.

Table No. 3.—Giving Seed Bed, Temperature and Length of Time Used In Testing the Germination of Forage Crop Seeds.

GERMINATION TABLE.

KIND OF SEED	Seed Bed	Temperature	Length of Time
Alfalfa	Between blotters	68° F.	5 days
Barley	Between blotters	68° F.	6 days
Brome grass	Between blotters	68°-86° F.	10 days
Buckwheat	Between blotters	68°-86° F.	5 days
Clover, red	Between blotters	68° F.	5 days
Clover, alsike	Top of blotter	68° F.	5 days
Clover, white	Top of blotter	68° F.	5 days
Corn	Cloth	68°-86° F.	5 days
Cow peas	Cloth	68°-86° F.	8 days
Flax	Top of blotter	68°-86° F.	6 days
Millet	Between blotters	68°-86° F.	5 days
Oats	Between blotters	68°-86° F.	5 days
Orchard grass	Between blotters	68°-86° F.	14 days
Rape	Between blotters	68° F.	6 days
Rye	Between blotters	68° F.	5 days
Red top	Top of blotter	68°-86° F.	10 days
Sorghum	Between blotters	68°-86° F.	6 days
Timothy	Top of blotter	68° F.	5 days
Wheat	Between blotters	68° F.	5 days
Kentucky blue grass.....	Top of blotter under bell jar	68°-86° F.	28 days

Table No. 4.—Giving Seed Bed, Temperature and Length of Time Used In Testing the Germination of Vegetable Seeds.

GERMINATION TABLE.

KIND OF SEED	Seed Bed	Temperature	Length of Time
Asparagus	Between blotters	68°-86° F.	14 days
Beans	Cloth	68°-86° F.	6 days
Beets*	Between blotters	68°-86° F.	10 days
Cabbage	Between blotters	68° F.	6 days
Cauliflower	Between blotters	68° F.	6 days
Carrots	Between blotters	68°-86° F.	14 days
Celery	Top of blotter	68°-86° F.	18 days
Citron	Cloth	68°-86° F.	6 days
Cucumber	Between blotters	68°-86° F.	6 days
Endive	Top of blotter	68° F.	8 days
Lettuce*	Between blotters	68° F.	3 days
Muskmelon	Between blotters	68°-86° F.	6 days
Onion	Between blotters	68°-86° F.	7 days
Parsley	Between blotters	68°-86° F.	28 days
Parsnip	Between blotters	68°-86° F.	14 days
Peas	Cloth	68°-86° F.	6 days
Pepper	Between blotters	68°-86° F.	10 days
Pumpkin	Cloth	68°-86° F.	6 days
Radish	Between blotters	68° F.	6 days
Salsify	Between blotters	68°-86° F.	10 days
Spinach	Between blotters	68° F.	10 days
Squash	Cloth	68°-86° F.	6 days
Tomatoes	Between blotters	68°-86° F.	10 days
Turnip	Between blotters	68° F.	6 days
Watermelon	Cloth	68°-86° F.	6 days

* Soak six hours before test is started.

EDUCATIONAL WORK.

Educational work has been carried on in the way of exhibits at various fairs throughout the state. In September, 1914, the Walla Walla Fair and the State Fair at North Yakima were attended. In September and October of 1915 the State Fair at North Yakima and the Pierce County Fair at Puyallup were attended.

STATE SEED EXHIBIT.

The seed exhibit consists of numbers of herbariums of weed seeds, four large manifold screens, containing mounted weed specimens with samples of seed of each and information attached giving injury and remedies for eradicating these pests; two large glass cases containing exhibit jars of commercial seed, both field and vegetable; colored plates of weeds with appended notes attached giving means of eradicating each; six dozen varieties of weed seeds mounted in cotton to bring out distinguishing features; attractive colored posters; also placards giving classification of weeds.

A part of the seed exhibit was shown at the Panama-Pacific Exposition at San Francisco in 1915.

SEED TESTS.

A Standard germinating chamber was exhibited showing laboratory method of giving seed the germination test. Home methods of germinating seeds were shown, giving ways farmers can test seed at home. Although simple, these methods are not generally known.

Comparative purity tests were given, showing the difference between good and bad seed, bringing out the importance of buying good seed rather than cheap seed. Farmers are surprised as a rule to know that a few cents more or less can make such a difference in the quality of the seed.

Farmers have manifested increasing interest each succeeding year in the exhibit, particularly in becoming familiar with weeds and means of eradicating them, also with poisonous weeds, such as camas, wild parsnip and various others which are dangerous to stock.

. WEED TRIPS.

The Department receives occasional requests to visit ranches to locate and identify poisonous plants which have killed livestock. Several trips of this kind were made. In one instance five thoroughbred cattle died from the effects of wild parsnip. Stockmen should be familiar with poisonous weeds—at least the most common ones—as they often suffer great losses due to them.

FOREIGN AND NOXIOUS WEEDS.

Foreign and noxious weed seeds are very often present in the various agricultural seeds. They not only reduce the quality of seeds

but a great deal of damage is done to the crop. By sowing clean seed this can be avoided.

If farmers really knew the great losses due to weeds they would make more of an effort to eradicate them and would buy good grades of seed.

Canada thistle is perhaps one of the worst pests in the state. It is a perennial and has very deep running rootstocks and is a vigorous grower. The nature of the plant makes it hard to eradicate. Wherever the rootstocks are broken they send up new shoots. Being a deep-rooted plant, Canada thistle should be plowed deep in summer just as the flowers open. As new shoots appear they should be cut down. Persistent effort will eradicate Canada thistle. The seed often occurs in grasses and clovers and in seed oats.

Though insignificant in appearance, dodder seed is a very formidable enemy to the farmer. It is a pernicious parasitic plant and is often called "love vine" from the nature of its clinging qualities. The tiny vine grows from the seed until it can find a plant to cling to. It then sends little root-like suckers into the neighboring plant and breaks away from the seed in the ground, obtaining its nourishment from the plant. It is a tiny thread-like vine having no leaves, which spreads from branch to branch until it has formed a thick mass covering large areas. Dodder bears white blossoms and is a gross seeder, bearing approximately more than a million seeds per pound. Clean cultivation and burning are the best remedies for eradication. Dodder is found in alfalfa and clover seed. Commercial seeds containing Canada thistle or dodder are prohibited for sale in the seed markets. As a consequence both are somewhat under control and are gradually disappearing. The law cannot be enforced too stringently in prohibiting the sale of seeds containing noxious weeds.

The following table shows some of the most common weed pests and the approximate number each bears per pound:

TABLE NO. 5.

COMMON NAME	SCIENTIFIC NAME	Number of Seeds
Dodder	Ouscuta spp.....	1,814,360
Plantain	Plantago major.....	1,814,360
Lamb's quarters	Chenopodium album.....	604,786
Canada thistle	Oardus arvensis.....	566,967
Buckhorn	Plantago lanceolata.....	348,915
Russian thistle	Salsola tragus.....	266,817
Wild mustard	Brassica arvensis.....	215,955
Green foxtail	Chaetochloa viridis.....	200,177
Bull thistle	Oardus lanceolatus.....	174,457
Quack grass	Agropyron repens.....	137,148
Wild buckwheat	Polygonum convolvulus.....	119,365
Corn cockle	Agrostemma githago.....	45,350

TABLE NO. 7.—RESULTS OF GERMINATION TESTS.

KIND OF SEED	Stand-ards	Num-ber of Tests	PER CENT. OF HARD SEEDS		
			High-est Test	Low-est Test	Aver-age Test
Alfalfa (<i>Medicago sativa</i>).....	80	35	96.50	54.00	86.60
Barley (<i>Hordeum vulgare</i>).....	90	4	100.00	93.50	96.67
Bluegrass, Canadian (<i>Poa compressa</i>).....	45	9	64.00	6.00	43.00
Bluegrass, Kentucky (<i>Poa pratensis</i>).....	45	1	94.00	.....	.....
Brome, awnless (<i>Bromus inermis</i>).....	75	15	94.50	73.00	87.40
Clover, alsike (<i>Trifolium hybridum</i>).....	75	42	94.90	80.00	82.93
Clover, red (<i>Trifolium pratense</i>).....	80	12	94.00	74.00	81.75
Clover, white (<i>Trifolium repens</i>).....	75	.....	.....	.....	.....
Corn, field (<i>Zea mays</i>).....	94	1	100.00	.....	.....
Corn, sweet	75	1	91.50	.....	.....
Millet, common (<i>Seteria italica</i>).....	85	3	100.00	64.00	82.50
Oats (<i>Avena sativa</i>).....	90	3	80.50	69.50	74.66
Orchard grass (<i>Dactylis glomerata</i>).....	70	.....	.....	.....	.....
Rape (<i>Brassica rapa</i>).....	90	2	87.50	11.50	49.50
Redtop (<i>Agrostis alba</i>).....	70	2	99.50	95.50	97.50
Vetch, spring (<i>Vicia sativa</i>).....	.....	1	52.00	.....	.....
Vetch, winter or hairy (<i>Vicia villosa</i>).....	.....	1	92.00	.....	.....
Rye grass, perennial (<i>Lolium perenne</i>).....	90	.....	.....	.....	.....
Rye grass, Italian (<i>Lolium italicum</i>).....	80	.....	.....	.....	.....
Sorghum (<i>Andropogon sorghum</i>).....	80	2	88.50	84.00	86.25
Timothy (<i>Phleum pratense</i>).....	85	20	99.00	78.00	91.82
Wheat (<i>Triticum aestivum</i>).....	90	2	99.50	.....	.....

TABLE NO. 8.—SHOWING THE OCCURRENCE OF FOREIGN SEEDS IN AGRICULTURAL SEEDS.

Number of Samples Tested.....															
NAMES OF															
FOREIGN SEEDS															
NUMBER OF TIMES OCCURRING															
179	4	88	104	53	1	6	5	43	6	1	4	2	43	5	4
Alfalfa	Barley	Clover, Alsike	Clover, red	Clover, white	Grass, Canadian blue	Grass, English rye	Grass, Italian rye	Grass, Kentucky blue	Grass, Orchard	Millet	Oats	Redtop	Timothy	Vetch	Sorghum, Sudan grass
Scientific Name															
Common Name															
Acalypha virginica	Three-seeded mercury	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Achillea millefolium	Yarrow	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	12	.....	.....
Agrostis alba	Redtop *	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	1	.....
Agrostemma githago	Cockle †	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Aisne Media	Chickweed	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Amaranthus graesizans	Tumbling amaranth	.....	2	3	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Amaranthus retroflexus	Rough pigweed	.....	2	2	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....
Ambrosia artemisiifolia	Ragweed	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Anthemis arvensis	Field camomile	.....	1	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
Anthemis cotula	Mayweed	.....	8	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Anthyllis vulneraria	Kidney vetch	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Arenaria serpyllifolia	Thyme leaved sandwort	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Atriplex sp.	Saltbush	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Avena fatua	Wild oats †	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Avena sativa	Oats *	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Barbarea vulgaris	Winter cress	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Brassica sp.	Mustard	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	.....	.....
Bromus secalinus	Chess	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....
Bromus hordeaceus	Soft chess	.....	1	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	1	.....
Bromus inermis	Field chess	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
Capsella bursa-pastoris	Shepherd's purse	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	8	.....	.....
Camelina sativa	Large seeded false flax	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Carduus arvensis	Canada thistle †	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....

* Agricultural seeds.

† Noxious weeds.

Table No. 8.—Showing the Occurrence of Foreign Seeds in Agricultural Seeds—Continued.

Number of Samples Tested.....																																
NAMES OF																																
FOREIGN SEEDS																																
Scientific Name											Common Name																					
Geranium dissectum	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Cut-leaved crane's bill.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Geranium pusillum	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Small flowered crane's bill.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Gramineae sp.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Grass species	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Hellianthus annuus	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Common sunflower	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Holcus lanatus	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Velvet grass	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Hordeum vulgare	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Barley	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Juncus tenuis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Slender rush	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Lepedium apetalum	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Peppergrass	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Lepedium campestra	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Field peppergrass	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Lepedium draba	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Hoary cress	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Lepedium virginicum	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Peppergrass	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Latuca vircosa	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prickley lettuce	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Lolium perenne	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Perennial rye grass	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Lotus corniculatus	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bird's-foot trefoil	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Malva sp.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mallow	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Medicago lupulina	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Trefoil	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Medicago sativa	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Alfalfa *	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Mellatus alba	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Sweet clover	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nepeta cataria	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Catmint	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Oenothera biennis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Evening primrose	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Panicum capillare	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Witch grass	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Paspalum setaceum	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Slender paspalum	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Phalaris canariensis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Canary seed	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

* Agricultural seeds.

Table No. 8.—Showing the Occurrence of Foreign Seeds in Agricultural Seeds—Continued.

Number of Samples Tested.....										
Names of										
Foreign Seeds										
Scientific Name	Number of Times Occurring									
	Common Name									
Spargula arvensis	2	1	1	1	1	1	1	1	1	1
Stellaria media	2	1	1	1	1	1	1	1	1	1
Syntherisma linearis	1	1	1	1	1	1	1	1	1	1
Syntherisma sanguinalis	1	1	1	1	1	1	1	1	1	1
Thlaspi arvense	1	1	1	1	1	1	1	1	1	1
Trifolium sp.	1	1	1	1	1	1	1	1	1	1
Trifolium hybridum	1	1	1	1	1	1	1	1	1	1
Trifolium incarnatum	1	1	1	1	1	1	1	1	1	1
Trifolium pratense	1	1	1	1	1	1	1	1	1	1
Trifolium procumbens	1	1	1	1	1	1	1	1	1	1
Trifolium repens	1	1	1	1	1	1	1	1	1	1
Triticum aestivum	1	1	1	1	1	1	1	1	1	1
Undetermined	1	1	1	1	1	1	1	1	1	1
Urtica gracilis	1	1	1	1	1	1	1	1	1	1
Valerianella sp.	1	1	1	1	1	1	1	1	1	1
Verbena sp.	1	1	1	1	1	1	1	1	1	1
Verbascum blattaria	1	1	1	1	1	1	1	1	1	1
Veronica arvensis	1	1	1	1	1	1	1	1	1	1
Veronica serpyllifolia	1	1	1	1	1	1	1	1	1	1
Vicia sp.	1	1	1	1	1	1	1	1	1	1
* Agricultural seeds.										

Pure seed is a most important factor in successful farming. If the annual losses caused by weeds on the farms in the state were calculated the amount would be found alarming.

The enforcement of the pure seed law is doing a great deal to prevent the spread of noxious weeds through seeds offered for sale. Were the weed laws observed more stringently it would be a great benefit to the farmer. Farmers and legislators should co-operate to control these pests. Land is too high priced to be allowed to be robbed of its productiveness by weeds.

It is discouraging to buy clean seed and to spend time preparing the seed bed only to find the land infested with weeds from the roadside and vacant lots near by.

The Department welcomes and gives careful consideration to all suggestions received that may have a tendency to increase its usefulness in fighting the foul seed problem.

Requests for seed tests and inquiries as to seeds and plants should be addressed to the Seed Laboratory, Department of Agriculture, Olympia, Washington.

Respectfully submitted,
KATHERINE G. STONE,
State Seed Analyst.

WASHINGTON STATE FAIR

Hon. H. T. Graves, Acting Commissioner of Agriculture.

SIR: I have the honor to submit to you herewith a resumé of the Washington State Fair for the years 1915 and 1916, together with suggestions for the betterment of the institution during the forthcoming biennium.

The Legislature of 1915 appropriated \$35,000.00 for the 1915 and 1916 State Fairs. Of this amount approximately \$10,000.00 was expended for equipment, repairs and permanent improvements—the principal items for which are as follows: Construction of mezzanine floor, woman's rest room, plumbing, bandstand, railings and exhibition booths in the Horticultural Building, wiring and equipping same with electric lamps, constructing one livestock barn, 50 by 250 feet, one livestock barn 50 by 235 feet; one-half of the cost of the latter being paid for by the Cascade International Stock Show, constructing an addition to the swine exhibits shed, 80 feet in length, constructing an addition to the hospital—thereby doubling its capacity, installing show cases in the Woman's Building, building booths in the Child Welfare Building and installing nursery in same, building exhibit and demonstration booths in the Machinery Building for the accommodation of the Children's Industrial Department, repairing Grandstand and rearranging boxes in same, building new fences, cutting down mound in center field, which was an obstruction to the view of the races, rebuilding stalls in horse barn, reroofing Poultry Building, repairing roofs on other buildings, plumbing, painting and papering cottage, wiring grounds and buildings and equipping completely with nitrogen and mazda electric lamps, painting Horticultural, Woman's, Children's and Machinery buildings, purchasing fire extinguishers, agricultural implements and office furniture and fixtures, and also making innumerable small repairs.

The construction of the livestock barns was made necessary on account of a fire having occurred during the Summer of 1915, which completely destroyed two of the old ones and seriously damaged another; the cost of the repair of which figures as a part of the expenditures noted above. The larger of the stock barns contains four rows of stalls and accommodates twice as many cattle as the old one did. The other new barn is not equipped with stalls, but is used for stock judging purposes.

The 1915 Fair was a success in every particular, and it was the verdict of many who were in a position to know that it was the best ever held upon the grounds up to that time.

The 1916 Fair was larger and better than that of 1915, except possibly the livestock department. With the exception of the exhibition of dairy cattle, exhibits in every department exceeded those of

1915, and notwithstanding the additional space afforded by the construction of the mezzanine floor in the Horticultural Building, it was full to overflowing with horticultural, agricultural and manufactured exhibits. The same may be said of every other exhibits building. In addition to this, the grounds were well filled with exhibits of various kinds, shown under canvas furnished by the exhibitors. A marked increase in the number of agricultural exhibits from the various counties of the state is noted. For the first time a Boys' and Girls' Camp composed of industrial teams from the different counties, was conducted with great success, which in connection with the children's exhibit afforded one of the best features of the Fair. The Child Welfare Exhibit, in conjunction with which was conducted a Day Nursery, was also an innovation which was well received.

While the attendance at the 1916 Fair exceeded that of 1915, it was disappointingly small, and it seems as though the interest in the Fair by many of those living in North Yakima and the Yakima Valley is not as manifest as it should be. The same may also be said of some of the breeders of dairy cattle, residing in the valley, whose herds were conspicuous by their absence this year. Whether these conditions were caused by the superabundance of work on hand, occasioned by the lateness of the season, or whether it is on account of the annual livestock show, which was instituted in North Yakima last year, dividing the interest of the business men and stock raisers, is a matter of conjecture. Nevertheless the financial statement shows a goodly balance on the right side of the ledger.

Several of the buildings are old and inadequate. Especially is this true of the Grandstand and also the Machinery Building. It is imperative that the Grandstand be replaced by a new structure before another Fair if racing is to be continued as one of the features. A building to house the children's exhibits is also badly needed. Other buildings will have to be provided with new roofs and painted. There will also have to be a great deal of new fencing built in place of that which is rotting out.

The State Fair should be the show window of the state, and in order to make it such each county should be represented by an exhibit of its products. That adequate means may be provided to defray the expenses of such exhibits, a law should be enacted empowering county commissioners to appropriate sufficient means out of the general fund of the county for that purpose. Thus it would enable those counties lying remote distance from the Fair to exhibit their products, and thereby assist in making it state wide—as the name implies. The result would be far reaching, and help to build up the Fair until it would be second to none in the Pacific Northwest and the pride of every resident of the state.

Respectfully submitted.

FRANK MEREDITH,
Secretary-Manager.

NINTH ANNUAL REPORT

OF THE

State Bank Examiner

OF THE

STATE OF WASHINGTON

DECEMBER 31, 1915

BY

W. E. HANSON

State Bank Examiner

OLYMPIA, WASH.

FRANK M. LAMBORN  PUBLIC PRINTER

1916

ROSTER OF THE BANKING DEPARTMENT.

W. E. HANSON, *State Bank Examiner*.....Olympia
FORREST I. GILL, *Deputy State Bank Examiner*.....Olympia
W. G. HALL, *Deputy State Bank Examiner*.....Spokane
C. S. MOODY, *Deputy State Bank Examiner*.....Seattle
R. A. LANGLEY, *Special Deputy State Bank Examiner*.....Olympia
MISS R. GEE, *Secretary*.....Olympia

STATE BANKING DEPARTMENT.

STATE OF WASHINGTON.

OLYMPIA, WASH., December 31, 1915.

*Honorable Ernest Lister, Governor of the State of Washington,
Olympia:*

SIR: In accordance with section thirty-eight (38), chapter two hundred twenty-five (225), of the Session Laws of the State of Washington for 1907, I have the honor to submit herewith the ninth annual report of this department, which exhibits the condition of two hundred seventy-five (275) state banks and trust companies, and eight (8) trust companies not acting in a banking capacity, operating in this state at the close of business at date of last call, November 10, 1915.

NINTH ANNUAL REPORT OF THE STATE BANK EXAMINER.

During the year 1915, five reports were asked for and made to this department; on the same dates reports were made by the national banks to the Comptroller of the Currency, to-wit: March 4th, May 1st, June 23d, September 2d and November 10th.

During the year, seven state banks were organized and authorized to do business by this department. There were three consolidations, one bank nationalized, six liquidated and two failed.

During the year, three hundred fifty-nine (359) regular examinations were made, according to law, of state banks and their branches and trust companies, including those that are doing a banking business, as well as those doing exclusively a trust business. For these services, fees were collected amounting to \$15,297.28. The fee is \$25 for each examination and 1-200 of 1 per cent. of the deposits at the date of examination.

A number of changes were made in the banking laws of the state at the last regular session of the legislature, the principal changes being as follows:

Allowing state banks and trust companies to subscribe for and carry as an asset on their books, stock of the Federal Reserve Banks.

The law governing reserve requirements was changed from 20% on demand liabilities to 15% on all deposits.

The trust company laws were amended, permitting national and state banks to do a trust company business—the national banks to first obtain permission from the Federal Reserve Board and the state banks to obtain permission from this department.

The Negotiable Instruments Act was amended in regard to the presentment and payment of demand instruments on

Saturday afternoon. No reference is now made in the act to Saturday afternoon, and all instruments of all kinds can now be presented and paid at any time on Saturday, without liability on the part of the payer.

A Mutual Savings Bank Act was passed, providing for the organization of mutual savings banks. No applications have been made for the organization of a bank under this act, at this writing.

One additional deputy examiner was provided for and the law governing the examination of banks was amended. The law now provides for the collection of examination fees for each complete examination. With the addition of one more deputy examiner, we are able to make at least one regular examination of each institution under the supervision of this department, every ten months. Mr. C. S. Moody, of Burlington, was appointed Deputy State Bank Examiner, on June 12th, complying with the law governing the appointment of deputy bank examiners.

An Insolvent Bank Act was passed, providing that insolvent banks should be liquidated through this department.

On the 19th day of July, this department took charge of the affairs of the First International Bank of South Bend, Washington, and placed Mr. Roy A. Langley in charge as Special Deputy State Bank Examiner, to assist in the liquidation of the institution. The process of liquidation has been very slow and difficult on account of all of the good assets of the bank being hypothecated as collateral for the obligations of the bank; also on account of the fact that the bank had been a borrower of collateral to hypothecate for its obligations. The very poor financial condition of the community has also been another difficulty to contend with. The expense in connection with the liquidation has been kept to the minimum and will be greatly reduced as soon as all claims have been filed and the affairs placed in such shape that they can be handled in this office, by this department.

The following is a copy of the statement of the affairs of the First International Bank of South Bend, according to the books of the bank at the close of business on July 17th:

RESOURCES.		LIABILITIES.	
Due from banks:		Deposits subject to check..	\$52,089 82
State Bank of Seattle...	\$11 56	County deposits	52,429 24
Puget Sound State Bank,		Savings deposits	25,716 81
Tacoma	5 81	Postal savings deposits....	1,963 10
Merchants National Bank,		Demand certificates of de-	
Portland	31 16	posit	14,367 84
Crocker National Bank,		Time certificates of deposit.	23,876 07
San Francisco	256 94	Cashier's checks	843 38
Continental and Commer-		Certified checks	57 50
cial National Bank,		Pacific State Bank, South	
Chicago	56 93	Bend	7,723 50
Capital National Bank,			
Olympia	426 03		
Bank of California, San			
Francisco	252 34		
Swedish American Bank,			
St. Paul	121 00		
Northern Bank & Trust			
Co., Seattle	16,104 22		
Cash on hand.....	138 65		
Cash items on hand.....	133 07		
	<u>\$17,537 71</u>		<u>\$179,067 26</u>
Loans and discounts (in		Capital stock	50,000 00
bank)	72,972 16	Surplus fund	7,838 46
Loans and discounts (hy-		Interest received	8,431 39
pothecated)	71,305 20	Exchange received	1 04
Real estate loans (in bank)	7,029 15	Rent received	300 00
Real estate loans (hy-		Mill acceptances	22,057 96
pothecated)	26,664 00	Bills rediscounted	6,000 00
Overdrafts	16 77	Bills payable	13,400 00
Bank building	12,000 00		
Furniture and fixtures....	4,000 00		
Other real estate owned...	22,352 43		
Profit and loss.....	3,338 49		
Bonds	12,123 35		
Warrants	1,601 60		
Expenses	9,827 85		
Interest paid	4,257 90		
Mill acceptances	22,057 96		
Teller's shorts	11 54		
Total.....	<u>\$287,096 11</u>	Total.....	<u>\$287,096 11</u>

Under the statements of banks for Pacific county will be found the report of condition of this bank at the close of business November 10th.

On the 29th day of March, this department took charge of the affairs of the Northport State Bank of Northport, Washington, and petitioned the Superior Court of Stevens county, through the Attorney General's office, for a receiver to be appointed to wind up its affairs. Miss Alice M. Janneck was appointed receiver by the court, on April 3d, 1915. The following is a report of the condition of the Northport State Bank

at the close of business on March 27th, 1915, according to the books of the bank:

RESOURCES.		LIABILITIES.	
Due from banks:		Individual deposits	\$30,888 35
Spokane & Eastern Trust Company, Spokane ...	\$7,478 03	County deposits	10,000 00
Chase National Bank, New York	2,936 74	City deposits	708 87
Bank of Montreal, Rossland, B. C.	725 23	Demand certificates of deposit	13,458 64
Currency	867 00		
Gold coin	675 00		
Silver coin	257 55		
Cash items	424 95		
	<u>\$13,364 50</u>		<u>\$55,055 86</u>
Loans and discounts.....	33,716 65	Capital stock	15,000 00
Loans on real estate.....	21,299 55	Surplus fund	6,000 00
Overdrafts	154 47	Interest	267 80
Bank building	2,000 00	Exchange	89 26
Furniture and fixtures....	1,000 00	Rent	10 00
Other real estate owned...	10,000 00	Bills payable	5,000 00
Warrants	15 75		
Expenses	604 24		
Teller's shorts	3 76		
	<u>\$81,422 92</u>		<u>\$81,422 92</u>
Total.....	\$81,422 92	Total.....	\$81,422 92

The following summary of "due from banks" or the deposits made by state banks and trust companies with their reserve agents discloses the fact that the state institutions are discriminating in favor of national banks, in the matter of reserve deposits, more than three to one.

DUE FROM BANKS.

Due from National Banks outside of the state	\$5,936,202 94	
Due from National Banks in the state....	8,207,863 95	\$14,144,066 89
Due from State Banks outside of the state	\$2,075,856 95	
Due from State Banks in the state.....	2,561,026 62	4,636,883 57
Due from sundry banks, including foreign countries.....		2,754,859 75
Total due from banks.....		<u>\$21,535,810 21</u>

National banks are prohibited from carrying balances with state banks in excess of ten per cent. of the bank's capital and surplus. The balance is then considered practically the same as a loan. Being that we are amply provided in this state with good, strong, state banking institutions, which can meet any and all competition along good, conservative lines, there can

be no good reason why state institutions should not co-operate to the extent of strengthening their own state institutions.

The Washington Bankers' Association has seen the necessity of more complete banking laws for the protection of the depositing public, and has appointed a commission to study the different banking laws recently enacted by the different states of the Union, as well as the Federal Reserve Act, and to present for the consideration of the 1917 session of the legislature a complete, new code of banking laws.

Mr. H. C. Lucas, president of the Washington Bankers' Association, has persuaded the following prominent bankers of the state, who have had many years' experience in banking, to accept appointment on this very important commission:

Mr. W. H. Pringle, vice-president of the Scandinavian American Bank of Tacoma, is chairman; the other members are Mr. J. H. Edwards, vice-president of the Dexter Horton Trust and Savings Bank of Seattle; Mr. C. J. Lord, president of the Capital National Bank of Olympia; Mr. J. W. Alexander, president of the Security State Bank of Chehalis, and Mr. C. E. Bingham, president of the C. E. Bingham & Co. Bank of Sedro Woolley.

The commission has organized and begun active work. They expect to secure the co-operation of the Attorney General's office, in assisting in the work of drafting a new banking code. I look forward to very effective work by this commission and a revision of the banking laws of this state that will make them second to none.

The banking laws, together with the Negotiable Instruments Act and the Bills of Lading Act, have been compiled and annotated by this department and Mr. E. W. Allen, assistant attorney general, and distributed to the state banks, free of charge. The pamphlet also contains forms and instructions in regard to the making of reports, etc., of state banks and trust companies.

Respectfully submitted,

W. E. HANSON,
State Bank Examiner.

EXPENSES AND RECEIPTS.

Expenses from January 1, 1915, to December 31, 1915, inclusive, consist of the following:

Salaries	\$11,350 17
Traveling, office and other expenses.....	6,692 08
Total expenses of department.....	\$18,042 25

Receipts of the department from January 1, 1915, to December 31, 1915, inclusive, are as follows:

Fees for examinations.....	\$14,384 25
Sale of annual reports.....	1 80
Miscellaneous receipts, filing reports, fines assessed, etc.....	911 23
Total receipts of department.....	\$15,297 28

Detailed statement of money received:

EXAMINATION FEES.

<i>Received from</i>	<i>Amount.</i>
Moxee State Bank, Moxee City.....	\$25 85
Issaquah State Bank, Issaquah.....	30 60
King County State Bank, Seattle.....	28 00
Lynden State Bank, Lynden.....	36 05
Northwestern State Bank, Bellingham.....	76 40
Skagit County Savings Bank & Trust Co., Mt. Vernon.....	53 20
LaConner State Bank, LaConner.....	32 80
First State Bank, LaCrosse.....	34 10
Security State Bank, LaCrosse.....	28 20
Citizens Bank, Anacortes.....	35 80
Lyman State Bank, Lyman.....	27 30
State Bank of East Stanwood, East Stanwood.....	29 25
Bank of Starbuck, Starbuck.....	28 55
Pomeroy State Bank, Pomeroy.....	54 10
Spokane State Bank, Spokane.....	34 75
Marysville State Bank, Marysville.....	33 25
Commercial Bank, Snohomish.....	31 10
C. E. Bingham & Co., Sedro Woolley.....	42 50
Farmers & Merchants Bank, Cashmere.....	32 10
Cashmere State Bank, Cashmere.....	30 80
Bank for Savings, Seattle.....	57 65
Mansfield State Bank, Mansfield.....	29 70
Farmers & Merchants Bank, Edison.....	27 90
Coulee State Bank, Coulee City.....	32 65
Farmers State Bank, Almira.....	27 05
Hartline State Bank, Hartline.....	29 50
Langley State Bank, Langley.....	26 00
Kirkland State Bank, Kirkland.....	28 00
Citizens Bank of Sultan, Sultan.....	26 85
Farmers & Merchants Bank, Rockford.....	29 30
Chehalis County Bank, Aberdeen.....	33 70
The Mabton Bank, Mabton.....	30 30
Central Bank of Toppenish, Toppenish.....	28 85
Farmers State Bank, Reardan.....	32 35
The Traders Bank, Toppenish.....	31 00
Prosser State Bank, Prosser.....	35 50

<i>Received from</i>	<i>Amount.</i>
Citizens State Bank, Prosser.....	\$33 35
University State Bank, Seattle.....	50 60
The Farmers Bank, Ellensburg.....	50 75
Central Bank & Trust Co. North Yakima.....	54 75
Kittitas State Bank, Kittitas.....	26 10
Bank of Ellensburg, Ellensburg.....	33 90
Scandinavian American Bank, Tacoma.....	139 80
American Savings Bank & Trust Co., Seattle.....	145 35
Rainier Valley State Bank, Seattle.....	32 00
Bank of Commerce, Everett (Riverside Branch).....	30 80
State Bank of Bellevue, Bellevue.....	25 30
Bank of Commerce, Everett.....	57 45
State Bank of Shelton, Shelton.....	39 75
Farmers & Lumbermen's Bank, Elma.....	29 80
Albion State Bank, Albion.....	29 25
First Savings Bank & Trust Co., Colfax.....	61 70
Hillyard State Bank, Hillyard.....	38 10
Bank of Fairfield, Fairfield.....	32 30
Bank of Latah, Latah.....	27 95
Selah State Bank, Selah.....	27 15
Specie Bank, Seattle.....	27 30
Yakima Trust Company, North Yakima.....	71 50
State Bank of Enumclaw, Enumclaw.....	33 20
State Bank of Buckley, Buckley.....	34 40
Citizens Bank of Tenino, Tenino.....	26 35
Cle Elum State Bank, Cle Elum.....	45 90
Cle Elum State Bank (Roslyn Branch).....	36 50
Eatonville State Bank, Eatonville.....	26 45
State Bank of Battle Ground, Battle Ground.....	25 60
Pe Ell State Bank, Pe Ell.....	25 70
Naches State Bank, Naches.....	27 10
Bank of Stanwood, Stanwood.....	39 00
The Rucker Bank, Hartford.....	27 05
State Bank of Edmonds, Edmonds.....	28 60
Citizens State Bank, Tekoa.....	31 85
Comegys, Hanford & Miller Bank, Thornton.....	29 15
Granite Falls State Bank, Granite Falls.....	27 45
Security State Bank, Richland.....	27 60
Everett Trust & Savings Bank, Everett.....	45 00
Bothell State Bank, Bothell.....	28 05
Leavenworth State Bank, Leavenworth.....	30 40
Tumwater Savings Bank, Leavenworth.....	30 50
North Side State Bank, Seattle.....	26 25
State Bank of Spangle, Spangle.....	29 25
State Bank of North Bend, North Bend.....	26 75
Grant County Bank, Ephrata.....	30 75
Bank of Endicott, Endicott.....	29 10
Bank of Farmington, Farmington.....	29 95
Citizens State Bank, Auburn.....	27 00
Wheeler State Bank, Wheeler.....	26 90
Union Bank of Granger, Granger.....	28 20
Outlook State Bank, Outlook.....	26 55
Sunnyside Bank, Sunnyside.....	34 95
Grandview State Bank, Grandview.....	30 15
First Bank of Wilkeson, Wilkeson.....	32 15
Vashon State Bank, Vashon.....	28 45
Ridgefield State Bank, Ridgefield.....	26 95

<i>Received from</i>	<i>Amount.</i>
Peoples State Bank, Enumclaw.....	\$32 55
Cowlitz County Bank, Kalama.....	31 95
Little Falls State Bank, Vader.....	27 95
Castle Rock Bank, Castle Rock.....	36 10
Almira State Bank, Almira.....	38 50
State Bank of Wilbur, Wilbur.....	43 75
Creston State Bank, Creston.....	31 15
Waverly Exchange Bank, Waverly.....	27 85
Bank of Winona, Winona.....	27 90
Elberton State Bank, Elberton.....	26 80
Waterville Savings Bank, Waterville.....	32 90
Douglas County Bank, Waterville.....	39 55
Withrow State Bank, Withrow.....	29 25
Commercial State Bank, Oakesdale.....	39 85
Centralla State Bank, Centralla.....	33 40
Bank of Commerce, Anacortes.....	32 75
Bank of Rosalia, Rosalia.....	34 00
Baumeister, Vollmer & Scott Bank, Asotin.....	29 95
St. John State Bank, St. John.....	32 05
Columbia Valley Bank, Wenatchee.....	47 45
Glenwood State Bank, Glenwood.....	26 05
Knettle State Bank, Pomeroy.....	35 50
Farmers & Merchants Bank, Centralla.....	42 45
Farmers State Bank, Centerville.....	27 90
Brooks & Company Bank, Goldendale.....	30 75
State Bank of Concrete, Concrete.....	26 60
Touchet State Bank, Touchet.....	26 55
Pine City State Bank, Pine City.....	28 05
Orting State Bank, Orting.....	29 75
Bank of Clallam County, Port Angeles.....	41 15
Merchants Bank, Port Townsend.....	51 60
Citizens Bank, Bremerton.....	34 80
Bremerton Trust & Savings Bank, Bremerton.....	28 95
Security State Bank, Newport.....	36 85
Metaline Falls State & Savings Bank, Metaline Falls.....	26 65
Ione State Bank, Ione.....	28 05
State Bank of Sequim, Sequim.....	27 70
Arlington State Bank, Arlington.....	31 70
Citizens State Bank, Arlington.....	34 30
Harrington State Bank, Harrington.....	29 40
Wilson Creek State Bank, Wilson Creek.....	29 60
Metropolitan Bank, Seattle.....	141 35
Methow Valley Bank, Pateros.....	25 55
Miners & Merchants Bank, Chelan.....	31 30
Lamont State Bank, Lamont.....	28 75
West Seattle State Bank, Seattle.....	27 05
Dexter Horton Trust & Savings Bank, Seattle.....	225 00
Northwest Trust & Safe Deposit Co., Seattle.....	103 60
Seattle Trust Company, Seattle.....	25 00
Scandinavian American Bank, Ballard.....	56 65
Scandinavian American Bank, Seattle.....	200 00
Scandinavian American Bank, Spokane.....	58 15
Othello State Bank, Othello.....	27 30
Warden State Bank, Warden.....	26 50
Security State Bank, Spokane.....	28 90
Union State Bank, Odessa.....	39 45
Spokane & Eastern Trust Company, Spokane.....	225 00

<i>Received from</i>	<i>Amount.</i>
Bank of Montreal, Spokane.....	\$117 65
Bank of Commerce, Everett (Coupeville Branch).....	29 70
Bank of Stevenson, Stevenson.....	30 20
Gillett State Bank, White Salmon.....	28 65
Oak Harbor State Bank, Oak Harbor.....	27 25
Liberty Bay Bank, Poulsbo.....	31 40
State Bank of Lyle, Lyle.....	26 75
Toledo State Bank, Toledo.....	27 95
Kitsap County Bank, Port Orchard.....	30 20
Washington Trust Company, Spokane.....	59 80
Tolt State Bank, Tolt.....	27 75
Molson State Bank, Molson.....	28 80
Union Title & Trust Co., Oroville.....	25 00
Oakville State Bank, Oakville.....	27 05
Security State Bank, Chehalis.....	35 10
Peoples Savings Bank, Seattle.....	132 00
Field & Lease, Bankers, Centralia.....	33 90
Okanogan State Bank, Riverside.....	27 55
Commercial Bank, Okanogan.....	28 60
State Bank of Morton, Morton.....	26 55
Commercial Bank, Chesaw.....	26 30
Omak State Bank, Omak.....	27 95
Bridgeport State Bank, Bridgeport.....	28 25
North Pacific Bank, Tacoma.....	33 55
Entiat State Bank, Entiat.....	25 75
Hamilton State Bank, Hamilton.....	27 30
State Bank of Sumner, Sumner.....	32 90
Commercial Bank, Conconully.....	27 45
Commercial Bank, Twisp.....	30 30
Fidelity Trust Company, Tacoma.....	225 00
First State Bank, Clear Lake.....	26 90
Puyallup State Bank, Puyallup.....	38 65
Okanogan State Bank, Riverside (Loomis Branch).....	26 85
San Juan County Bank, Friday Harbor.....	37 35
United States Trust Company, Aberdeen.....	38 95
State Bank of Kent, Kent.....	34 55
Broadway State Bank, Seattle.....	34 05
State Bank of Black Diamond, Black Diamond.....	27 30
Bank of Edwall, Edwall.....	29 35
Canadian Bank of Commerce, Seattle.....	165 90
State Bank of Charleston, Charleston.....	26 55
Union Savings & Trust Company, Seattle.....	225 00
Union Savings & Trust Company, Seattle (Ballard Branch).....	46 25
Union Savings & Trust Co., Seattle (Georgetown Branch).....	42 85
Title Trust Company, Seattle.....	25 00
Japanese Commercial Bank, Seattle.....	45 20
Oriental American Bank, Seattle.....	34 10
Eltopia State Bank, Eltopia.....	26 35
Pacific State Bank, South Bend.....	48 85
Farmers State Bank, Connell.....	26 25
Montesano State Bank, Montesano.....	47 90
Bank of Elma, Elma.....	33 10
Tekoa State Bank, Tekoa.....	34 20
Citizens State Bank, Puyallup.....	40 15
Lumberman's Bank, Hoquiam.....	43 55
First Bank of White Bluffs.....	27 40
Ruff State Bank, Ruff.....	29 10

<i>Received from</i>	<i>Amount.</i>
Yakima Valley Bank, North Yakima.....	\$76 35
Bank of Sprague, Sprague.....	40 90
Port Angeles Trust & Savings Bank, Port Angeles.....	28 30
First Bank of Anatone, Anatone.....	26 25
Lincoln County State Bank, Davenport.....	34 25
Hunters Exchange Office, Hunters.....	26 95
First State Bank, Deer Park.....	28 60
Bank of Asotin County, Asotin.....	28 60
Green Lake State Bank, Seattle.....	31 25
State Bank of Clarkston, Clarkston.....	27 35
Colville Loan & Trust Company, Colville.....	54 35
Ferry County State Bank, Republic.....	32 90
Orient State Bank, Orient.....	26 35
Bank of Colville (Kettle Falls Branch).....	27 80
Bank of Colville, Colville.....	38 00
Bank of Chewelah, Chewelah.....	28 35
Farmers & Merchants Bank, Springdale.....	27 30
Roy State Bank, Roy.....	28 70
First State Bank, Garfield.....	31 15
Security State Bank, Palouse.....	39 50
Farmers State Bank, Johnson.....	27 10
State Bank of Conway, Conway.....	25 70
Napavine State Bank, Napavine.....	25 95
Duvall State Bank, Duvall.....	28 05
Union Park Bank, Spokane.....	29 60
State Bank of Winlock, Winlock.....	28 60
Farmers State Bank, Uniontown.....	31 60
Colton State Bank, Colton.....	30 40
Colfax State Bank, Colfax.....	30 30
State Bank of Goldendale, Goldendale.....	34 65
Peoples State Bank, Walla Walla.....	50 30
State Bank of Blaine, Blaine.....	29 70
Exchange Bank, Waitsburg.....	35 70
First State Bank, Prescott.....	31 35
Redmond State Bank, Redmond.....	29 45
Bank of Bickleton, Bickleton.....	29 70
Farmers Savings Bank, Walla Walla.....	65 10
Washington Exchange Bank, Vancouver.....	38 65
Willapa Harbor State Bank, Raymond.....	37 95
Mortgage Trust & Savings Bank, Seattle.....	53 05
Bankers Trust Company, Tacoma.....	52 90
Wahkiakum County Bank, Cathlamet.....	31 55
Leavenworth State Bank, Leavenworth.....	30 70
Tumwater Savings Bank, Leavenworth.....	30 40
Home State Bank, Blaine.....	31 60
Quincy Valley State Bank, Quincy.....	29 30
Ferndale State Bank, Ferndale.....	30 85
German-American State Bank, Ritzville.....	36 15
Farmers State Bank, Hatton.....	27 80
Garrison Bros. State Bank, Sumas.....	31 90
Nooksack Valley State Bank, Everson.....	28 50
Custer State Bank, Custer.....	26 70
Bank of Pasco, Pasco.....	29 05
State Bank of Connell.....	30 55
Citizens Bank & Trust Co., Everett.....	38 95
Commercial Bank & Trust Co., Wenatchee.....	36 90
Kelso State Bank, Kelso.....	37 15

<i>Received from</i>	<i>Amount.</i>
Clarke County Bank, Washougal.....	\$29 20
First State Bank, Yacolt.....	27 15
Farmers Bank, Krupp.....	29 55
Citizens Bank of Renton, Renton.....	38 40
Hayes & Hayes, Bankers, Aberdeen.....	114 65
Union Trust & Savings Bank, Spokane.....	83 35
Farmers & Mechanics Bank, Spokane.....	37 05
Puget Sound State Bank, Tacoma.....	68 55
Walla Walla Safety Deposit & Trust Co., Walla Walla....	25 00
Woodland State Bank, Woodland.....	30 45
Farmers & Merchants State Bank, Malden.....	31 95
Tacoma Savings Bank & Trust Co., Tacoma.....	108 35
Skagit County Savings Bank & Trust Co., Mt. Vernon....	53 50
Steptoe State Bank, Steptoe.....	26 35
LaCenter State Bank, LaCenter.....	27 05
Coffman, Dobson Co., Chehalis.....	71 95
Northwestern State Bank, Bellingham.....	69 75
Albion State Bank, Albion.....	28 40
First State Bank, LaCrosse.....	34 15
Farmers State Bank, St. John.....	27 95
Rainier Valley State Bank, Seattle.....	33 15
Issaquah State Bank, Issaquah.....	30 40
King County State Bank, Seattle.....	28 90
State Bank of Seattle, Seattle.....	90 55
Clark Bros. & Klein Trust Co., Spokane.....	25 00
Farmers & Merchants Bank, Edison.....	27 15
Security State Bank, LaCrosse.....	29 35
Southwestern Washington Bank, Ilwaco.....	29 90
Bank for Savings, Seattle.....	58 50
Spokane State Bank, Spokane.....	36 45
Lynden State Bank, Lynden.....	36 05
Bank of Ellensburg, Ellensburg.....	34 10
C. E. Bingham & Co., Sedro Woolley.....	44 55
Citizens Bank, Anacortes.....	34 80
Specie Bank, Seattle.....	28 80
Washington Safe Deposit & Trust Co., Spokane.....	25 00
Pullman State Bank, Pullman.....	43 80
Lyman State Bank, Lyman.....	27 75
State Bank of Bellevue, Bellevue.....	25 90
Fremont State Bank, Seattle.....	31 60
Langley State Bank, Langley.....	26 55
LaConner State Bank, LaConner.....	31 30
Marysville State Bank, Marysville.....	33 40
State Bank of East Stanwood, East Stanwood.....	29 20
Commercial Bank of Snohomish County, Snohomish.....	31 25
Kittitas State Bank, Kittitas.....	26 45
Farmers Bank, Ellensburg.....	53 65
Citizens Bank, Sultan.....	27 25
University State Bank, Seattle.....	54 10
Pomeroy State Bank, Pomeroy.....	61 25
Kirkland State Bank, Kirkland.....	27 50
Guardian Savings Bank, Seattle.....	30 25
Citizens State Bank, Prosser.....	33 05
Prosser State Bank, Prosser.....	35 20
Bank of Starbuck, Starbuck.....	29 25
Traders Bank, Toppenish.....	34 55
Farmers & Merchants Bank, Rockford.....	30 20

<i>Received from</i>	<i>Amount.</i>	
Bank of Fairfield, Fairfield.....	\$31 05	
Northern Bank & Trust Co., Seattle.....	113 50	
Bank of Latah, Latah.....	28 35	
Scandinavian American Bank, Tacoma.....	136 70	
Central Bank of Toppenish, Toppenish.....	30 15	
Selah State Bank, Selah.....	28 75	
Farmers State Bank, Sprague.....	25 85	
First Savings & Trust Co., Colfax.....	62 15	
Hillyard State Bank, Hillyard.....	37 65	
Aberdeen State Bank, Aberdeen.....	33 30	
American Savings Bank & Trust Co., Seattle.....	154 80	
Farmers State Bank, Reardan.....	32 80	
State Bank of Buckley, Buckley.....	33 00	
Bothell State Bank, Bothell.....	27 75	
Citizens Bank of Tenino, Tenino.....	26 15	
Cle Elum State Bank, Cle Elum.....	46 55	
Bank of Stanwood, Stanwood.....	39 25	
Coulee State Bank, Coulee City.....	34 55	
State Bank of North Bend, North Bend.....	26 95	
Farmers & Lumbermen's Bank, Elma.....	30 35	
State Bank of Edmonds, Edmonds.....	28 85	
German American Mercantile Bank, Seattle.....	85 85	
Cle Elum State Bank (Roslyn Branch).....	37 05	
Hartline State Bank, Hartline.....	31 00	
Farmers State Bank, Almira.....	29 20	
Security State Bank, Richland.....	27 50	
Cashmere State Bank, Cashmere.....	30 90	
Farmers & Merchants Bank, Cashmere.....	34 70	
State Bank of Enumclaw, Enumclaw.....	33 75	
Granite Falls State Bank, Granite Falls.....	28 00	
Yakima Trust Company, North Yakima.....	75 20	
Peoples State Bank, Enumclaw.....	31 75	
Eatonville State Bank, Eatonville.....	27 35	
North Side State Bank, Seattle.....	26 45	
Land Title Savings Bank, Spokane.....	25 20	
The Rucker Bank, Hartford.....	27 75	
Central Bank & Trust Co., North Yakima.....	55 15	
First Bank of Wilkeson, Wilkeson.....	32 15	\$14,384 25

FILING SEMI-ANNUAL REPORTS.

<i>Received from</i>	<i>Amount.</i>	
Seattle Trust Company, Seattle.....	\$10 00	
Title Trust Company, Seattle.....	10 00	
Union Title & Trust Co., Oroville.....	10 00	
Union Trust Company, Seattle.....	10 00	
Clark Bros. & Klein Trust Co., Spokane.....	10 00	
Washington Safe Deposit & Trust Co., Spokane.....	10 00	
United States Trust Co., Seattle.....	10 00	
Walla Walla Safety Deposit & Trust Co., Walla Walla.....	10 00	
Seattle Trust Company, Seattle.....	10 00	
Title Trust Company, Seattle.....	10 00	
Union Title & Trust Co., Oroville.....	10 00	
Clark Bros. & Klein Trust Co., Spokane.....	10 00	
Washington Safe Deposit & Trust Co., Spokane.....	10 00	
Walla Walla Safety Deposit & Trust Co., Walla Walla.....	10 00	140 00

FINES ASSESSED.

<i>Received from</i>	<i>Amount.</i>	
Langley State Bank, Langley.....	\$10 00	
Security State Bank, LaCrosse.....	20 00	
State Bank of Battle Ground, Battle Ground.....	30 00	
State Bank of North Bend, North Bend.....	20 00	
Sumas State Bank, Sumas.....	130 00	
Central Bank & Trust Co., North Yakima.....	10 00	
Aberdeen State Bank, Aberdeen.....	20 00	
State Bank of Bellevue, Bellevue.....	10 00	
Farmers State Bank, Uniontown.....	30 00	
North Side State Bank, Seattle.....	10 00	
Puget Sound State Bank, Tacoma.....	10 00	
Mansfield State Bank, Mansfield.....	20 00	
State Bank of Clarkston.....	20 00	
Oak Harbor State Bank, Oak Harbor.....	20 00	
Metaline Falls State & Savings Bank, Metaline Falls.....	20 00	
Grant County Bank, Ephrata.....	30 00	
Security State Bank, LaCrosse.....	20 00	
First Bank of Wilkeson, Wilkeson.....	20 00	
Albion State Bank, Albion.....	10 00	
Specie Bank, Seattle.....	10 00	
Southwestern Washington Bank, Ilwaco.....	10 00	
Commercial Bank, Conconully.....	20 00	
Kirkland State Bank, Kirkland.....	10 00	
Arlington State Bank, Arlington.....	10 00	
Bothell State Bank, Bothell.....	10 00	
Citizens Bank of Georgetown, Seattle.....	20 00	
Security State Bank, Richland.....	10 00	
Farmers State Bank, Centerville.....	10 00	
Comegys, Hanford & Miller Bank, Thornton.....	20 00	
Withrow State Bank, Withrow.....	20 00	
Prosser State Bank, Prosser.....	10 00	
Redmond State Bank, Redmond.....	10 00	
Bank of Pasco, Pasco.....	10 00	
Granite Falls State Bank, Granite Falls.....	10 00	
Quincy Valley State Bank, Quincy.....	10 00	
Pine City State Bank, Pine City.....	10 00	
Farmers State Bank, Hatton.....	10 00	
The Sunnyside Bank, Sunnyside.....	20 00	
Cowlitz County Bank, Kalama.....	30 00	
Central Bank of Toppenish, Toppenish.....	10 00	
St John State Bank, St. John.....	20 00	\$760 00

MISCELLANEOUS COLLECTIONS.

<i>Received from</i>	<i>Amount.</i>	
Sale of Annual Reports.....	\$1 80	
Refund from Northern Pacific Railway for unused mileage.	11 23	13 03
Total receipts for year.....		\$15,297 28

BANKS AUTHORIZED DURING THE YEAR 1915.

NAME OF BANK	Location	Capital Stock
Centralla State Bank.....	Centralla.....	\$100,000 00
*Glenwood State Bank.....	Glenwood.....	10,000 00
Farmers State Bank.....	Connell.....	10,000 00
State Bank of Conway.....	Conway.....	10,000 00
Guardian Savings Bank.....	Seattle.....	100,000 00
Farmers State Bank.....	Sprague.....	25,000 00
Farmers & Merchants Bank.....	Odessa.....	25,000 00

* Conversion from private bank.

INCREASE OF CAPITAL STOCK DURING 1915.

NAME OF BANK	Location	Increased From	To
Steptoe State Bank.....	Steptoe.....	\$14,200 00	\$20,000 00
Farmers Bank	Ellensburg.....	25,000 00	50,000 00

DECREASE OF CAPITAL STOCK DURING 1915.

NAME OF BANK	Location	Decreased From	To
Union Bank	Granger.....	\$25,000 00	\$10,000 00

CHANGE OF NAME.

FORMERLY	NOW	Location
Union Savings Bank.....	Security State Bank.....	Spokane
Chehalis County Bank.....	Aberdeen State Bank.....	Aberdeen

STATE BANKS NATIONALIZED IN 1915.

FORMERLY	NOW	Location
Camas State Bank.....	First National Bank.....	Camas

BANKS FAILED IN 1915.

NAME OF BANK	Location
Northport State Bank.....	Northport
First International Bank.....	South Bend

BANKS CONSOLIDATED IN 1915.

NAME OF BANK	Location	Consolidated With	Date
Sumas State Bank.....	Sumas.....	Garrison Bros. State Bank..	April
Farmers State Bank.....	Pullman.....	First National Bank.....	May
Tumwater Savings Bank.....	Leavenworth...	Leavenworth State Bank....	October

BANKS LIQUIDATED DURING 1915.

NAME OF BANK	Location
Bank of Lind.....	Lind
Kiona State Bank.....	Kiona
Hoquiam Trust Company.....	Hoquiam
Bank of Kahlotus.....	Kahlotus
Citizens State Bank.....	Wilson Creek
Callispell Valley Bank.....	Usk

DEPOSITS OF STATE BANKS.

The following table shows the total deposits of state banks, by counties:

COUNTIES	Statement of October 31, 1914	Statement of November 10, 1915
Adams	\$447,268 15	\$529,379 51
Asotin	228,021 16	340,921 52
Benton	439,147 51	485,059 59
Chelan	1,416,624 04	1,798,676 42
Clallam	506,996 35	494,206 74
Clarke	591,982 57	489,945 60
Columbia	78,640 64	85,847 66
Cowlitz	638,070 46	689,938 57
Douglas	811,047 05	903,852 56
Ferry	192,708 97	167,458 27
Franklin	281,200 70	260,775 40
Garfield	645,984 45	989,267 46
Grant	869,756 89	863,021 98
Grays Harbor	3,567,309 01	3,782,157 22
Island	70,930 25	76,700 75
Jefferson	497,980 08	545,936 77
King	40,494,779 49	41,790,080 96
Kitsap	459,902 41	551,793 22
Kittitas	1,170,772 22	1,282,046 67
Klickitat	488,260 24	606,043 75
Lewis	2,209,891 57	2,060,826 88
Lincoln	2,595,688 29	2,253,680 22
Mason	301,950 90	334,157 54
Okanogan	526,172 78	556,919 86
Pacific	1,028,112 87	975,544 24
Pend Oreille	334,280 76	340,359 26
Pierce	9,956,335 79	9,968,906 66
San Juan	279,157 36	239,786 45
Sagit	1,188,531 16	1,214,184 99
Skamania	68,706 27	268,073 93
Snohomish	2,628,444 02	2,706,006 26
Spokane	* 22,759,990 64	13,979,677 06
Stevens	597,041 62	580,912 48
Thurston	94,227 24	23,464 73
Wahkiakum	45,352 86	117,616 56
Walla Walla	1,631,818 65	1,735,299 07
Whatcom	1,901,702 04	1,799,871 71
Whitman	4,339,749 51	3,635,302 26
Yakima	2,058,181 20	2,186,785 14
Total Deposits.....	\$108,439,218 12	\$101,553,085 91

* Included trust accounts.

SAVINGS DEPOSITS OF STATE BANKS.

The following table shows the total savings deposits of state banks, by counties.

COUNTIES	Statement of October 31, 1914	Statement of November 10, 1915
Adams	\$7,121 08	\$7,735 19
Asotin		
Benton	22,166 22	26,711 79
Chelan	223,817 90	308,509 02
Clallam	19,749 53	38,140 31
Clarke	34,277 15	40,430 27
Columbia		
Cowlitz	8,788 25	15,302 97
Douglas	108,295 29	137,362 57
Ferry	2,796 70	1,654 85
Franklin	6,075 29	12,201 27
Garfield		
Grant	3,556 50	9,913 89
Grays Harbor	688,477 67	688,564 30
Island	1,086 44	3,077 36
Jefferson	194,077 34	206,077 06
King	28,981,165 89	23,494,732 58
Kitsap	186,495 74	221,348 80
Kittitas	274,082 47	318,445 90
Klickitat		11,092 72
Lewis	648,499 18	561,552 76
Lincoln	112,407 81	100,312 12
Mason	133,919 65	140,095 68
Okanogan		
Pacific	221,953 26	147,560 70
Pend Oreille	67,068 77	67,712 31
Pierce	4,834,230 17	4,849,010 75
San Juan	25,231 51	24,786 55
Skagit	91,963 13	115,963 20
Skamania		
Snohomish	891,495 67	929,624 08
Spokane	5,085,044 15	5,051,831 44
Stevens	98,756 44	105,106 81
Thurston	10,877 29	
Wahkiakum	3,639 75	2,558 66
Walla Walla	176,281 52	233,262 96
Whatcom	308,760 08	336,200 92
Whitman	284,027 51	271,389 05
Yakima	272,813 00	289,106 35
Totals.....	\$38,986,958 25	\$38,712,375 19

DUE FROM BANKS.

Due from National Banks, outside of the state...	\$5,936,202 94	
Due from National Banks, in the state.....	8,207,863 95	\$14,144,066 89
Due from State Banks, outside of the state.....	\$2,075,856 95	
Due from State Banks, in the state.....	2,561,026 62	4,636,883 57
Due from sundry banks, including foreign countries.....		2,754,859 75
Total due from banks.....		\$21,535,810 21

RESOURCES AND LIABILITIES OF ALL STATE BANKS AND TRUST COMPANIES.

The following table shows the aggregate of resources and liabilities of all state banks and trust companies, doing business in this state, on the 31st day of October, 1914, and the 10th day of November, 1915:

RESOURCES	Statement of October 31, 1914	Statement of November 10, 1915
Loans on real estate.....	\$11,973,518 11	\$12,948,402 78
Other loans and discounts.....	56,663,220 75	56,761,810 05
Overdrafts	262,658 47	222,835 28
Stocks, bonds and warrants.....	15,967,254 86	16,804,586 50
Banking house, furniture and fixtures.....	5,833,789 10	6,033,173 83
Other real estate owned.....	3,439,212 88	3,949,793 18
Due from banks.....	19,244,341 86	21,535,810 21
Cash and exchange.....	8,964,794 75	7,592,175 16
Expenses	1,663,183 55	1,617,698 26
Other resources, including trust fund investments.....	9,388,357 87	36,969 32
Totals.....	\$133,429,331 70	\$127,508,254 51
LIABILITIES		
Capital stock paid in.....	\$15,817,500 00	\$15,621,700 00
Surplus fund	3,901,020 94	4,890,379 39
Undivided profits	3,853,417 90	3,732,048 98
Dividends unpaid	17,686 20	6,734 44
Due to banks.....	5,008,645 17	5,733,031 68
City, county and state deposits.....	1,853,172 68	2,293,574 54
Postal savings deposits.....	686,829 09	636,192 05
Deposits subject to check.....	40,767,030 21	42,741,389 58
Demand certificates of deposit.....	1,711,832 49	1,919,902 50
Time certificates of deposit.....	9,103,708 20	8,770,902 02
Savings deposits	38,966,956 25	38,712,375 19
Trust funds	9,502,247 56	148,703 43
Letters of credit.....	1,574 02	3,355 00
Certified checks	156,370 76	141,878 34
Cashiers' checks	801,225 04	543,074 80
Re-discounts	340,393 11	358,860 53
Bills payable	914,988 27	1,609,164 91
Other liabilities	2,731 82	79,987 13
Totals.....	\$133,429,331 70	\$127,508,254 51

TRUST FUNDS AS REPORTED BY THE TRUST COMPANIES AND THE BANKS DOING A TRUST COMPANY BUSINESS, AT CLOSE OF BUSINESS NOVEMBER 10, 1915.

Securities held in trust.....	\$9,156,466 47
Real estate held in trust.....	14,742,421 05
Trust funds	254,494 03
	<hr/> \$24,153,381 55
Trusts accepted	\$24,153,381 55

REPORT OF STATE BANKS, INCLUDING SAVINGS BANKS, SHOWING CONDI- TION AT CLOSE OF BUSINESS ON NOVEMBER 10, 1915

ADAMS COUNTY.

HATTON—FARMERS STATE BANK.

W. H. MILLER, President.

LEO C. CROSSLAND, Cashier.

RESOURCES.	
Loans and discounts.....	\$81,798 81
Overdrafts	135 43
Bonds and warrants.....	1,544 53
Banking house	1,000 00
Furniture and fixtures....	1,400 00
Other real estate owned...	6,483 11
Due from banks.....	4,215 83
Cash on hand.....	2,245 26
Expenses	284 58
Total.....	\$99,107 55

LIABILITIES.	
Capital paid in.....	\$10,000 00
Surplus fund	1,000 00
Undivided profits	4,148 98
Deposits subject to check..	29,544 15
Demand certificates of de- posit	7,523 33
Cashier's checks	3 00
Time certificates of deposit.	6,142 76
Savings deposits	710 33
Certified checks	35 00
Bills payable	40,000 00
Total.....	\$99,107 55

OTHELLO—OTHELLO STATE BANK.

WM. SNYDER, President.

JOHN W. WEBSTER, Cashier.

RESOURCES.	
Loans and discounts.....	\$48,822 07
Overdrafts	555 47
Bonds and warrants.....	3,807 66
Banking house	1,700 00
Furniture and fixtures....	1,900 00
Other real estate owned...	2,227 95
Due from banks.....	5,789 84
Checks and other cash Items	320 41
Cash on hand.....	2,850 48
Expenses	1,793 93
Total.....	\$69,767 81

LIABILITIES.	
Capital paid in.....	\$10,000 00
Surplus fund	2,000 00
Undivided profits	2,885 96
Deposits subject to check..	33,072 12
Demand certificates of de- posit	21,381 61
Cashier's checks	428 12
Total.....	\$69,767 81

RITZVILLE—GERMAN-AMERICAN STATE BANK.

C. H. CLODIUS, President.

J. F. LANSING, Cashier.

RESOURCES.	
Loans and discounts.....	\$319,339 55
Overdrafts	438 29
Bonds and warrants	4,893 75
Furniture and fixtures....	3,500 00
Other real estate owned...	2,100 00
Due from banks.....	26,728 70
Exchanges for clearing house	12,548 68
Cash on hand.....	10,857 33
Expenses	8,794 77
Total.....	\$389,201 07

LIABILITIES.	
Capital paid in.....	\$75,000 00
Surplus fund	4,500 00
Undivided profits	19,161 98
Due to banks.....	18 43
Deposits subject to check.	115,360 75
Demand certificates of de- posit	7,227 29
Time certificates of de- posit	100,912 76
Savings deposits	7,024 86
Bills payable	60,000 00
Total.....	\$389,201 07

ASOTIN COUNTY.

ANATONE—FIRST BANK OF ANATONE.

ELI BOLICK, *President.*JOHN K. MCINTOSH, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$34,040 94	Capital paid in.....	\$10,000 00
Overdrafts	893 15	Surplus fund	500 00
Bonds and warrants.....	429 50	Undivided profits	2,243 46
Banking house, furniture and fixtures	2,113 75	Deposits subject to check..	39,402 34
Other real estate owned...	1,070 00	Time certificates of deposit	12,425 10
Due from banks.....	21,775 00		
Cash on hand.....	1,820 07		
Expenses	2,428 49		
Total.....	\$64,570 90	Total.....	\$64,570 90

ASOTIN—BANK OF ASOTIN COUNTY.

BLX AYERS, *President.*J. B. JONES, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$83,784 99	Capital paid in.....	\$25,000 00
Bonds and warrants.....	9,590 87	Surplus fund	5,000 00
Stocks and other securities	2,000 00	Undivided profits	5,918 82
Banking house	7,600 00	Deposits subject to check.	90,318 86
Furniture and fixtures....	1,500 00	Demand certificates of de- posit	1,453 37
Due from banks.....	44,321 59	Time certificates of de- posit	39,096 40
Checks and other cash items	290 69		
Cash on hand.....	14,320 36		
Expenses	3,378 95		
Total.....	\$166,787 45	Total.....	\$166,787 45

*ASOTIN—BAUMEISTER, VOLLMER & SCOTT BANK.

E. BAUMEISTER, *President.*E. MATTHES, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$85,902 79	Capital paid in.....	\$15,000 00
Bonds and warrants.....	2,121 18	Undivided profits	6,863 89
Banking house	10,000 00	Deposits subject to check.	83,432 28
Furniture and fixtures....	2,056 37	Time certificates of de- posit	28,845 09
Due from banks.....	19,134 34	Certified checks	281 15
Checks and other cash items	3,751 02		
Cash on hand.....	5,985 59		
Expenses	5,471 12		
Totals.....	\$134,422 41	Totals.....	\$134,422 41

* Formerly private bank.

ASOTIN COUNTY—CONTINUED.

CLARKSTON—STATE BANK OF CLARKSTON.

L. MORRIS, *President.*J. L. TAGGART, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$53,518 10
Overdrafts	2,230 01
Bonds and warrants.....	708 04
Banking house	4,700 00
Furniture and fixtures....	1,820 20
Due from banks.....	9,174 85
Exchanges for clearing house	19 00
Cash on hand.....	1,484 58
Total.....	\$73,654 78

LIABILITIES.	
Capital paid in.....	\$15,000 00
Surplus fund	1,500 00
Undivided profits	987 85
Deposits subject to check..	32,548 41
Demand certificates of de- posit	937 04
Time certificates of deposit	12,181 48
Re-discounts	3,000 00
Bills payable	7,500 00
Total.....	\$73,654 78

BENTON COUNTY.

*KENNEWICK—BANK OF KENNEWICK.

EMERY OLMSTEAD, *President.*M. W. MATTECHECK, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$67,322 08
Overdrafts	796 20
Stocks and other securities	765 00
Furniture and fixtures....	4,332 15
Other real estate owned..	13,626 33
Checks and other cash items	178 40
Cash on hand.....	95 71
Other	740 86
Expenses	26,420 58
Total.....	\$114,277 31

LIABILITIES.	
Capital paid in.....	\$25,000 00
Undivided profits	15,678 06
Deposits subject to check.	263 45
Cashier's checks	1 70
Time certificates of de- posit	25,000 00
Savings deposits	134 03
Bills payable	15,000 00
Special account	33,200 07
Total.....	\$114,277 31

* Liquidating.

PROSSER—CITIZENS STATE BANK.

C. H. PEARL, *President.*GUY H. PEARL, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$193,995 54
Overdrafts	84 48
Bonds and warrants.....	3,754 48
Banking house	12,000 00
Other real estate owned..	900 00
Due from banks.....	20,466 23
Exchanges for clearing house	1,293 94
Cash on hand.....	4,819 62
Interest and expenses....	9,055 95
Totals.....	\$247,270 24

LIABILITIES.	
Capital paid in.....	\$25,000 00
Surplus fund	25,000 00
Undivided profits	11,451 40
Deposits subject to check.	99,342 59
Demand certificates of de- posit	1,945 20
Time certificates of deposit	50,326 28
Savings deposits	9,204 77
Bills payable	25,000 00
Totals.....	\$247,270 24

BENTON COUNTY—CONTINUED.

PROSSER—PROSSER STATE BANK.

E. KEMP, *President.*J. F. SEARS, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$173,773 12	Capital paid in.....	\$40,000 00
Overdrafts	470 45	Surplus fund	10,000 00
Bonds and warrants.....	5,614 94	Undivided profits	4,273 27
Stocks and other securities	4,000 00	Due to banks.....	758 35
Banking house	25,000 00	State deposits	10,000 00
Furniture and fixtures...	4,851 52	Deposits subject to check.	124,229 57
Other real estate owned..	21,239 60	Demand certificates of de-	
Due from banks.....	16,658.29	posit	2,640 60
Checks and other cash		Time certificates of de-	
Items	437 57	posit	49,439 29
Exchanges for clearing		Savings deposits	17,372 99
house	14 34	Certified checks	200 00
Cash on hand.....	6,128 80		
Expenses	725 44		
Total.....	\$258,914 07	Total.....	\$258,914 07

*RICHLAND—SECURITY STATE BANK.

W. R. AMON, *President.*A. L. NELSON, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$38,981 47	Capital paid in.....	\$20,000 00
Overdrafts	1,490 38	Surplus fund	500 00
Bonds and warrants.....	36 25	Undivided profits	430 05
Banking house	15,000 00	Deposits subject to check..	40,882 24
Furniture and fixtures.....	2,600 00	Demand certificates of de-	
Due from banks.....	12,961 52	posit	10,069 53
Checks and other cash		Certified checks	15 66
Items	129 00		
Cash on hand.....	698 86		
Total.....	\$71,897 48	Total.....	\$71,897 48

* Formerly private bank.

WHITE BLUFFS—FIRST BANK OF WHITE BLUFFS.

L. E. JOHNSON, *President.*W. J. KINCAID, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$29,059 16	Capital paid in.....	\$10,000 00
Overdrafts	565 09	Surplus fund	750 00
Bonds and warrants.....	147 50	Undivided profits	3,821 91
Banking house	3,335 42	Due to banks.....	13 22
Furniture and fixtures....	2,300 00	Deposits subject to check..	30,958 13
Other real estate owned...	2,479 94	Demand certificates of de-	
Due from banks.....	14,625 61	posit	1,212 30
Checks and other cash		Time certificates of deposit	10,563 24
Items	80 35	Certified checks	486 45
Cash on hand.....	1,890 20		
Expenses	3,321 98		
Total.....	\$57,805 25	Total.....	\$57,805 25

CHELAN COUNTY.

CASHMERE—CASHMERE STATE BANK.

GUY C. BROWNE, *President.*E. F. STOWELL, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$117,863 46
Overdrafts	985 27
Bonds and warrants.....	1,029 20
Stocks and other securities	2,084 87
Banking house	10,511 33
Furniture and fixtures....	3,000 00
Other real estate owned..	14,798 16
Due from banks.....	21,638 57
Checks and other cash items	826 16
Cash on hand.....	3,753 22
Expenses	6,498 30
Total.....	\$182,988 54

LIABILITIES.	
Capital paid in.....	\$25,000 00
Surplus fund	8,000 00
Undivided profits	7,911 52
Postal savings deposits...	557 23
Deposits subject to check.	101,271 34
Demand certificates of de- posit	328 07
Time certificates of de- posit	17,162 53
Savings deposits	9,915 35
Certified checks	342 50
Re-discounts	2,500 00
Bills payable	10,000 00
Total.....	\$182,988 54

CASHMERE—FARMERS & MERCHANTS BANK.

JOHN C. LILLY, *President.*C. D. HALFERTY, JR., *Cashier.*

RESOURCES.	
Loans and discounts	\$164,743 65
Overdrafts	864 29
Stocks and other securities	1,000 00
Banking house	14,266 06
Furniture and fixtures...	4,909 05
Other real estate owned..	5,242 52
Due from banks.....	16,472 97
Checks and other cash items	1,953 74
Cash on hand.....	6,073 73
Total.....	\$215,526 01

LIABILITIES.	
Capital paid in.....	\$25,000 00
Surplus fund	7,500 00
Undivided profits	975 11
Deposits subject to check.	135,979 76
Demand certificates of de- posit	1,146 49
Cashier's checks	1,452 96
Time certificates of de- posit	17,164 68
Savings deposits	11,307 01
Bills payable	15,000 00
Total.....	\$215,526 01

CHELAN—MINERS & MERCHANTS BANK.

J. A. VANSLYKE, *President.*H. W. VANSLYKE, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$114,690 75
Bonds and warrants.....	6,746 37
Banking house	10,000 00
Furniture and fixtures...	2,250 00
Other real estate owned..	6,308 01
Due from banks.....	40,288 24
Cash on hand.....	8,073 75
Expenses	1,648 15
Total.....	\$190,005 27

LIABILITIES.	
Capital paid in.....	\$25,000 00
Surplus fund	22,000 00
Undivided profits	4,360 10
Postal savings deposits...	555 25
Deposits subject to check.	90,669 72
Demand certificates of de- posit	15,423 83
Time certificates of de- posit	28,358 25
Savings deposits	3,632 51
Certified checks	5 61
Total.....	\$190,005 27

CHELAN COUNTY—CONTINUED.

ENTIAT—ENTIAT STATE BANK.

HARMON WILCOX, *President.*

J. R. KENNEDY, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$31,143 24	Capital paid in.....	\$10,000 00
Overdrafts	712 64	Undivided profits	1,768 99
Banking house	2,000 00	Deposits subject to check..	44,152 15
Furniture and fixtures....	2,000 00	Demand certificates of de-	
Due from banks.....	23,770 82	posit	1,033 08
Checks and other cash items	17 39	Time certificates of deposit	6,377 86
Cash on hand.....	2,096 65	Savings deposits	630 58
Expenses	2,221 92		
Totals.....	\$63,962 66	Totals.....	\$63,962 66

LEAVENWORTH—LEAVENWORTH STATE BANK.

F. A. SINCLAIR, *President.*

R. B. FIELD, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$204,928 89	Capital paid in.....	\$25,000 00
Overdrafts	1,201 71	Surplus fund	5,000 00
Bonds and warrants.....	5,846 35	Undivided profits	4,833 43
Stocks and other securities	2,599 15	Deposits subject to check.	154,722 91
Banking house	11,126 59	Cashier's checks	3,936 13
Furniture and fixtures...	7,451 20	Time certificates of de-	
Other real estate owned..	4,128 90	posit	9,381 99
Due from banks.....	23,434 09	Savings deposits	78,612 71
Checks and other cash			
items	968 30		
Cash on hand.....	16,237 85		
Interest and expenses....	3,564 14		
Total.....	\$281,487 17	Total.....	\$281,487 17

WENATCHEE—COLUMBIA VALLEY BANK.

GUY C. BROWNE, *President.*

CHAS. E. OWENS, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$466,123 81	Capital paid in.....	\$100,000 00
Overdrafts	1,360 27	Surplus fund	20,000 00
Bonds and warrants.....	27,472 26	Undivided profits	19,370 94
Stocks and other securities	7,089 91	Dividends unpaid	174 00
Banking house	60,643 11	Due to banks.....	47,514 30
Furniture and fixtures...	6,624 75	Postal savings deposits...	5,532 02
Other real estate owned..	6,685 84	State deposits	50,000 00
Due from banks.....	144,584 26	Deposits subject to check.	392,181 04
Checks and other cash		Demand certificates of de-	
items	3,912 03	posit	4,105 56
Cash on hand.....	27,329 50	Cashier's checks	586 95
Expenses	15,570 96	Time certificates of de-	
		posit	21,670 77
		Savings deposits	105,561 12
		Certified checks	700 00
Total.....	\$767,396 70	Total.....	\$767,396 70

CHELAN COUNTY—CONTINUED.

WENATCHEE—COMMERCIAL BANK & TRUST COMPANY.

FRANK W. SHULTZ, *President.*DAVID HOLMBERG, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$245,633 68
Overdrafts	582 69
Bonds and warrants.....	8,189 84
Furniture and fixtures...	13,000 00
Other real estate owned..	21,000 00
Due from banks.....	72,130 60
Checks and other cash items	11,648 99
Cash on hand.....	7,485 69
Total.....	\$379,671 49

LIABILITIES.	
Capital paid in.....	\$50,000 00
Surplus fund	2,500 00
Undivided profits	989 98
Deposits subject to check.	259,696 22
Demand certificates of deposit	14,362 08
Cashier's checks	953 40
Time certificates of deposit	10,685 45
Savings deposits	40,388 46
Certified checks	95 90
Total.....	\$379,671 49

CLALLAM COUNTY.

PORT ANGELES—BANK OF CLALLAM COUNTY.

H. E. LUTZ, *President.*S. J. LUTZ, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$234,930 59
Overdrafts	96 68
Bonds and warrants.....	37,726 14
Furniture and fixtures...	1,900 00
Other real estate owned..	3,170 00
Due from banks.....	57,895 13
Checks and other cash items	422 71
Exchanges for clearing house	1,611 14
Cash on hand.....	22,577 63
Interest and expenses....	4,352 86
Total.....	\$364,682 88

LIABILITIES.	
Capital paid in.....	\$25,000 00
Surplus fund	6,500 00
Undivided profits	6,140 17
Postal savings deposits...	3,633 71
Deposits subject to check.	219,410 54
Demand certificates of deposit	6,156 72
Cashier's checks	18,764 83
Time certificates of deposit	57,874 75
Savings deposits	21,039 53
Certified checks	162 63
Total.....	\$364,682 88

PORT ANGELES—PORT ANGELES TRUST & SAVINGS BANK.

R. D. WILLSON, *President.*BENJ. N. PHILLIPS, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$83,955 25
Overdrafts	54 14
Bonds and warrants.....	15,984 21
Furniture and fixtures...	2,427 45
Due from banks.....	9,529 52
Checks and other cash items	6,402 83
Exchanges for clearing house	643 02
Cash on hand.....	9,258 70
Expenses and interest....	6,457 87
Total.....	\$134,712 99

LIABILITIES.	
Capital paid in.....	\$25,000 00
Undivided profits	5,326 53
State deposits	10,000 00
Deposits subject to check.	53,690 05
Demand certificates of deposit	173 56
Cashier's checks	400 10
Time certificates of deposit	27,295 40
Savings deposits	12,727 35
Certified checks	100 00
Total.....	\$134,712 99

CLALLAM COUNTY—CONTINUED.

SEQUIM—STATE BANK OF SEQUIM.

H. J. BUGGE, *President.*R. W. SCHUMACHER, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$44,668 99	Capital paid in.....	\$10,000 00
Overdrafts	271 78	Surplus fund	2,000 00
Bonds and warrants.....	12,585 52	Undivided profits	893 73
Banking house	2,100 00	Postal savings deposits....	1,056 04
Furniture and fixtures....	1,700 00	Deposits subject to check..	48,521 95
Other real estate owned...	2,200 00	Demand certificates of de-	
Due from banks.....	7,979 36	posit	1,566 26
Checks and other cash		Time certificates of deposit	7,259 89
items	254 25	Savings deposits	4,373 43
Cash on hand.....	3,658 04		
Expenses	253 36		
Total.....	\$75,671 30	Total.....	\$75,671 30

CLARKE COUNTY.

*BATTLE GROUND—STATE BANK OF BATTLE GROUND.

FRED ELLIS, *President.*H. C. CORNELL, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$14,680 56	Capital paid in.....	\$10,000 00
Overdrafts	167 98	Undivided profits	1,321 97
Bonds and warrants.....	1,342 46	Deposits subject to check..	15,475 86
Banking house	3,000 00	Demand certificates of de-	
Furniture and fixtures....	1,725 00	posit	1,013 26
Other real estate owned...	800 00	Time certificates of deposit	3,789 45
Due from banks.....	6,152 60		
Cash on hand.....	2,741 12		
Expenses	990 82		
Total.....	\$31,600 54	Total.....	\$31,600 54

* Formerly private bank.

LaCENTER—LaCENTER STATE BANK.

W. A. MANSFIELD, *President.*C. A. BUTTON, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$32,160 39	Capital paid in.....	\$10,000 00
Bonds and warrants.....	5,371 99	Surplus fund	1,000 00
Banking house	2,537 85	Undivided profits	3,731 11
Furniture and fixtures....	1,967 53	Postal savings deposits....	668 60
Due from banks.....	9,710 39	Deposits subject to check..	31,783 35
Cash on hand.....	4,371 15	Demand certificates of de-	
Expenses	1,572 86	posit	62 20
		Time certificates of deposit	10,446 90
Total.....	\$57,692 16	Total.....	\$57,692 16

CLARKE COUNTY—CONTINUED.

RIDGEFIELD—RIDGEFIELD STATE BANK.

E. L. THOMPSON, *President.*E. A. BLACKMORE, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$38,270 66
Overdrafts	1,802 75
Bonds and warrants.....	2,195 25
Furniture and fixtures.....	720 00
Due from banks.....	10,125 87
Cash on hand.....	1,533 93
Expenses	2,449 75

Total..... \$57,098 21

LIABILITIES.	
Capital paid in.....	\$10,000 00
Surplus fund	1,100 00
Undivided profits	2,902 92
Postal savings deposits....	843 93
Deposits subject to check..	32,740 45
Demand certificates of de- posit	209 00
Time certificates of deposit	3,596 00
Savings deposits	5,705 91

Total..... \$57,098 21

VANCOUVER—WASHINGTON EXCHANGE BANK.

LLOYD DUBOIS, *President.*O. F. ZUMSTEG, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$138,498 45
Bonds and warrants.....	78,620 90
Banking house	25,000 00
Furniture and fixtures...	6,000 00
Other real estate owned..	1,742 05
Due from banks.....	47,545 24
Exchanges for clearing house	1,067 80
Cash on hand.....	12,360 20
Expenses	1,658 37

Total..... \$312,493 01

LIABILITIES.	
Capital paid in.....	\$50,000 00
Surplus fund	1,000 00
Undivided profits	7,192 83
Postal savings deposits...	4,661 12
Deposits subject to check.	209,920 38
Demand certificates of de- posit	1,079 57
Cashier's checks	116 28
Time certificates of de- posit	11,174 50
Savings deposits	27,264 70
Certified checks	83 63

Total..... \$312,493 01

WASHOUGAL—CLARKE COUNTY BANK.

C. M. KEEP, *President.*THOS. S. KEEP, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$51,482 24
Overdrafts	32 00
Bonds and warrants.....	11,355 72
Stocks and other securities	500 00
Banking house	3,300 00
Furniture and fixtures...	2,138 35
Other real estate owned..	275 00
Due from banks.....	30,378 20
Checks and other cash items	14 65
Cash on hand	6,810 80
Expenses	4,796 92

Total..... \$111,083 88

LIABILITIES.	
Capital paid in.....	\$15,000 00
Surplus fund	1,000 00
Undivided profits	5,596 82
Postal savings deposits...	1,837 10
Deposits subject to check.	64,212 19
Demand certificates of de- posit	2,074 88
Time certificates of de- posit	21,362 89

Total..... \$111,083 88

CLARKE COUNTY—CONTINUED.

YACOLT—FIRST STATE BANK OF YACOLT.

C. F. HENDRICKSEN, *President.*

C. JORGEN OLSON, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$27,614 11	Capital paid in.....	\$10,000 00
Bonds and warrants.....	2,000 00	Surplus fund	400 00
Banking house	3,920 13	Undivided profits	2,515 45
Furniture and fixtures....	2,337 87	Postal savings deposits...	1,177 49
Other real estate owned...	425 47	Deposits subject to check..	30,707 95
Due from banks.....	11,532 91	Demand certificates of de-	
Cash on hand.....	2,463 09	posit	478 35
Expenses	2,445 32	Savings deposits	7,459 66
Total.....	\$52,738 90	Total.....	\$52,738 90

COLUMBIA COUNTY.

STARBUCK—BANK OF STARBUCK.

W. E. SPROUT, *President.*

M. C. ZINTHEO, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$72,015 67	Capital paid in.....	\$25,000 00
Overdrafts	210 77	Surplus fund	5,000 00
Bonds and warrants.....	3,000 00	Undivided profits	6,857 90
Banking house	3,000 00	Postal savings deposits...	1,194 39
Furniture and fixtures....	1,800 00	Deposits subject to check.	68,847 83
Other real estate owned..	1,617 64	Cashier's checks	378 50
Due from banks.....	31,543 27	Time certificates of de-	
Checks and other cash		posit	15,426 94
Items	64 50		
Cash on hand.....	5,617 35		
Expenses	3,836 36		
Total.....	\$122,705 56	Total.....	\$122,705 56

COWLITZ COUNTY.

CASTLE ROCK—THE CASTLE ROCK BANK.

J. A. BYERLY, *President.*

G. L. BULAND, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$140,303 42	Capital paid in.....	\$25,000 00
Overdrafts	132 81	Surplus fund	25,000 00
Bonds and warrants.....	12,526 36	Undivided profits	5,969 68
Banking house	35,000 00	Postal savings deposits...	1,481 75
Due from banks.....	68,531 38	Deposits subject to check.	173,428 62
Checks and other cash		Time certificates of de-	
Items	241 06	posit	32,580 79
Cash on hand.....	5,775 31		
Expenses	950 50		
Total.....	\$263,460 84	Total.....	\$263,460 84

COWLITZ COUNTY—CONTINUED.

KALAMA—COWLITZ COUNTY BANK.

L. F. IMUS, *President.*J. P. ATKIN, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$125,130 46
Overdrafts	1,676 27
Bonds and warrants.....	16,884 75
Banking house	1,000 00
Furniture and fixtures...	1,200 00
Other real estate owned..	700 00
Due from banks.....	6,842 27
Checks and other cash items	1,724 38
Cash on hand.....	11,978 71
Expenses	2,922 92
Total.....	\$170,059 76

LIABILITIES.	
Capital paid in.....	\$25,000 00
Surplus fund	10,000 00
Undivided profits	10,690 87
Dividends unpaid	100 00
Postal savings deposits...	9,426 35
Deposits subject to check.	85,700 08
Demand certificates of deposit	984 75
Cashier's checks	1,854 00
Time certificates of deposit	16,303 71
Bills payable	10,000 00
Total.....	\$170,059 76

KELSO—KELSO STATE BANK.

F. W. CAROTHERS, *President.*F. L. STEWART, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$218,529 11
Overdrafts	2,377 55
Bonds and warrants.....	9,719 08
Stocks and other securities	296 53
Banking house	25,040 49
Furniture and fixtures...	9,012 58
Other real estate owned..	5,177 83
Due from banks.....	46,526 29
Checks and other cash items	1,129 67
Cash on hand.....	10,936 42
Expenses	18,424 59
Total.....	\$347,170 14

LIABILITIES.	
Capital paid in.....	\$25,000 00
Surplus fund	25,000 00
Undivided profits	19,586 35
Due to banks.....	3,525 59
Postal savings deposits...	2,777 58
State deposits	25,000 00
Deposits subject to check.	162,328 78
Demand certificates of deposit	11,428 40
Cashier's checks	756 79
Time certificates of deposit	43,558 88
Savings deposits	15,302 97
Certified checks	4 80
Re-discounts	3,900 00
Bills payable	9,000 00
Total.....	\$347,170 14

WOODLAND—WOODLAND STATE BANK.

L. N. PLAMONDON, *President.*GEO. E. COCHRANE, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$100,724 19
Overdrafts	36 96
Bonds and warrants.....	5,494 77
Banking house	3,578 56
Furniture and fixtures...	2,543 75
Other real estate owned..	4,664 79
Due from banks.....	13,328 35
Checks and other cash items	821 89
Cash on hand.....	3,514 32
Expenses	2,450 74
Total.....	\$137,158 32

LIABILITIES.	
Capital paid in.....	\$25,000 00
Surplus fund	1,350 00
Undivided profits	3,613 59
Deposits subject to check.	81,412 92
Demand certificates of deposit	1,455 63
Cashier's checks	2,058 54
Time certificates of deposit	18,548 64
Certified checks	19 00
Other	3,700 00
Total.....	\$137,158 32

DOUGLAS COUNTY.

BRIDGEPORT—BRIDGEPORT STATE BANK.

S. D. SANDERS, *President.*

T. J. EAST, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$74,380 55	Capital paid in.....	\$15,000 00
Overdrafts	311 67	Surplus fund	6,000 00
Bonds and warrants.....	3,534 67	Undivided profits	4,241 54
Furniture and fixtures...	2,300 00	Deposits subject to check.	50,751 56
Due from banks.....	10,641 96	Demand certificates of de-	
Checks and other cash		posit	1,515 86
items	3 23	Time certificates of de-	
Cash on hand.....	7,231 60	posit	13,948 64
Expenses	3,053 92	Bills payable	10,000 00
Total.....	\$101,457 60	Total.....	\$101,457 60

MANSFIELD—MANSFIELD STATE BANK.

W. N. LONG, *President.*

L. H. MERITT, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$174,108 06	Capital paid in.....	\$25,000 00
Overdrafts	4,629 52	Surplus fund	10,000 00
Bonds and warrants.....	1,210 00	Undivided profits	11,371 84
Banking house	6,000 00	Due to banks.....	2,208 87
Furniture and fixtures....	2,000 00	Deposits subject to check.	116,648 58
Due from banks.....	5,132 64	Demand certificates of de-	
Checks and other cash		posit	4,472 10
items	3,185 92	Time certificates of de-	
Cash on hand.....	4,328 85	posit	14,873 06
Expenses	6,479 46	Bills payable	22,500 00
Total.....	\$207,074 45	Total.....	\$207,074 45

WATERVILLE—DOUGLAS COUNTY BANK.

M. E. LIES, *President.*

C. S. VALENTINE, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$333,983 68	Capital paid in.....	\$30,000 00
Overdrafts	2,154 89	Surplus fund	10,000 00
Bonds and warrants.....	2,316 08	Undivided profits	25,357 56
Banking house	13,000 00	Due to banks.....	3,973 11
Furniture and fixtures...	2,000 00	Deposits subject to check.	224,457 02
Other real estate owned..	4,620 60	Demand certificates of de-	
Due from banks.....	83,207 77	posit	26,924 88
Checks and other cash		Time certificates of de-	
items	884 95	posit	56,288 94
Cash on hand.....	5,350 30	Savings deposits	66,261 51
Expenses	7,252 65	Bills payable	11,507 90
Total.....	\$454,770 92	Total.....	\$454,770 92

DOUGLAS COUNTY—CONTINUED.

WATERVILLE—THE WATERVILLE SAVINGS BANK.

C. T. HANSEN, *President.*GEO. P. WILEY, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$249,234 54
Overdrafts	1,363 71
Bonds and warrants.....	3,910 31
Furniture and fixtures...	3,000 00
Due from banks.....	29,580 32
Checks and other cash Items	713 27
Cash on hand.....	10,518 20
Expenses	12,386 48
Total.....	\$310,706 83

LIABILITIES.	
Capital paid in.....	\$50,000 00
Surplus fund	8,000 00
Undivided profits	21,184 44
Postal savings deposits...	716 86
Deposits subject to check.	91,134 17
Demand certificates of de- posit	11,090 74
Time certificates of de- posit	56,682 13
Savings deposits	51,898 49
Bills payable	20,000 00
Total.....	\$310,706 83

WITHROW—WITHROW STATE BANK.

F. E. WESTON, *President.*L. A. WESTON, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$113,745 74
Overdrafts	674 12
Bonds and warrants.....	2,802 63
Furniture and fixtures...	1,600 00
Due from banks.....	12,530 51
Checks and other cash Items	264 60
Cash on hand.....	3,157 67
Expenses	5,941 42
Total.....	\$140,716 69

LIABILITIES.	
Capital paid in.....	\$15,000 00
Surplus fund	300 00
Undivided profits	10,410 65
Deposits subject to check.	60,613 61
Demand certificates of de- posit	4,308 40
Cashier's checks	1,977 64
Time certificates of de- posit	23,903 82
Savings deposits	19,202 57
Bills payable	5,000 00
Total.....	\$140,716 69

FERRY COUNTY.

ORIENT—THE ORIENT STATE BANK.

E. A. AKERLY, *President.*P. H. BLOM, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$31,804 77
Overdrafts	437 56
Bonds and warrants.....	6,312 38
Banking house	1,700 00
Furniture and fixtures.....	1,723 65
Other real estate owned...	367 53
Due from banks.....	3,823 16
Checks and other cash Items	133 55
Cash on hand.....	1,650 05
Expenses	3,001 71
Total.....	\$50,954 36

LIABILITIES.	
Capital paid in.....	\$10,000 00
Surplus fund	400 00
Undivided profits	2,426 68
State deposits	4,939 82
Deposits subject to check..	23,197 56
Time certificates of de- posit	3,194 55
Savings deposits	1,654 85
Bills payable	4,961 25
Cashier's checks	179 65
Total.....	\$50,954 36

FERRY COUNTY—CONTINUED.

REPUBLIC—FERRY COUNTY STATE BANK.

P. H. WALSH, *President.*

JOS. L. WALSH, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$89,771 70	Capital paid in.....	\$25,000 00
Overdrafts	16 68	Surplus fund	15,000 00
Bonds and warrants.....	53,813 68	Undivided profits	11,836 91
Banking house	800 00	Postal savings deposits...	6,328 01
Furniture and fixtures....	1,587 00	Deposits subject to check.	113,571 81
Due from banks.....	19,313 32	Demand certificates of de-	
Cash on hand.....	11,975 38	posit	22 90
Expenses	8,404 56	Cashier's checks	449 79
Other	446 45	Time certificates of de-	
		posit	13,834 33
		Certified checks	85 00
Total.....	\$186,128 75	Total.....	\$186,128 75

FRANKLIN COUNTY.

CONNELL—FARMERS STATE BANK.

C. W. NELSON, *President.*

J. B. HELMICK, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$68,432 30	Capital paid in.....	\$10,000 00
Overdrafts	115 07	Undivided profits	910 04
Bonds and warrants.....	17 75	Deposits subject to check..	36,004 47
Furniture and fixtures....	1,033 37	Demand certificates of de-	
Due from banks.....	6,197 68	posit	100 00
Exchanges for clearing		Cashier's checks	151 46
house	27 42	Time certificates of de-	
Cash on hand.....	2,489 67	posit	2,708 78
Expenses	1,561 49	Bills payable	30,000 00
Total.....	\$79,874 75	Total.....	\$79,874 75

CONNELL—STATE BANK OF CONNELL.

JNO. H. SCHLOMER, *President.*

W. H. MILLER, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$140,921 59	Capital paid in.....	\$15,000 00
Overdrafts	813 00	Surplus fund	3,000 00
Banking house	7,575 00	Undivided profits	9,030 48
Furniture and fixtures...	2,745 00	Deposits subject to check.	80,899 02
Other real estate owned..	2,381 49	Demand certificates of de-	
Due from banks.....	10,564 01	posit	78 75
Checks and other cash		Cashier's checks	428 30
items	51 40	Time certificates of de-	
Cash on hand.....	6,910 30	posit	32,577 19
Expenses	5,461 70	Certified checks	409 75
		Bills payable	36,000 00
Total.....	\$177,423 49	Total.....	\$177,423 49

FRANKLIN COUNTY—CONTINUED.

ELTOPIA—ELTOPIA STATE BANK.

ROBERT JAHNKE, *President.*W. C. BANNERMAN, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$36,912 40	Capital paid in.....	\$10,000 00
Overdrafts	24 71	Surplus fund	500 00
Furniture and fixtures....	883 85	Undivided profits	2,574 23
Due from banks.....	4,222 39	Deposits subject to check..	20,489 39
Cash on hand.....	1,180 93	Cashier's checks	477 19
Expenses	439 07	Time certificates of de-	
		posit	7,122 54
		Bills payable	2,500 00
Total.....	\$43,663 35	Total.....	\$43,663 35

PASCO—BANK OF PASCO.

J. B. CRAIN, *President.*E. W. LANDT, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$82,292 85	Capital paid in.....	\$50,000 00
Overdrafts	285 28	Surplus fund	2,500 00
Bonds and warrants	8,572 51	Undivided profits	12,399 49
Stocks and other securities	1,412 66	Postal savings deposits...	1,390 42
Banking house	14,000 00	State deposits	10,000 00
Furniture and fixtures....	3,500 00	Deposits subject to check.	50,652 22
Other real estate owned..	10,258 00	Cashier's checks	1,101 49
Due from banks.....	8,973 38	Time certificates of de-	
Checks and other cash		posit	3,983 16
items	1,123 70	Savings deposits	12,201 27
Exchanges for clearing		Bills payable	4,000 00
house	556 78		
Cash on hand.....	9,442 56		
Expenses	7,810 33		
Total.....	\$148,228 05	Total.....	\$148,228 05

GARFIELD COUNTY.

*POMEROY—KNETTLE STATE BANK.

N. D. KNETTLE, *President.*L. N. KNETTLE, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$261,116 30	Capital paid in.....	\$50,000 00
Bonds and warrants.....	802 90	Undivided profits	3,984 06
Furniture and fixtures...	500 00	Deposits subject to check.	196,491 23
Due from banks.....	37,635 29	Demand certificates of de-	
Checks and other cash		posit	12,863 91
items	2,364 15	Time certificates of de-	
Cash on hand.....	18,432 19	posit	57,511 63
Total.....	\$320,850 83	Total.....	\$320,850 83

* Formerly private bank.

GARFIELD COUNTY—CONTINUED.

POMEROY—POMEROY STATE BANK.

R. L. RUSH, *President.*

W. B. MORRIS, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$664,932 93
Overdrafts	304 47
Bonds and warrants.....	2,674 04
Banking house	7,000 00
Due from banks.....	156,378 30
Checks and other cash Items	15 00
Cash on hand.....	23,407 32
Expenses	4,324 34
Total.....	\$859,036 40

LIABILITIES.	
Capital paid in.....	\$50,000 00
Surplus fund	50,000 00
Undivided profits	36,635 71
Due to banks.....	75 38
Deposits subject to check.	569,815 18
Demand certificates of de- posit	9,447 61
Time certificates of de- posit	142,353 52
Certified checks	709 00
Total.....	\$859,036 40

GRANT COUNTY.

COULEE CITY—COULEE STATE BANK.

JAMES HOWELL, *President.*

J. B. PETERSON, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$141,555 71
Overdrafts	2,095 29
Bonds and warrants.....	3,171 41
Other real estate owned..	27,694 81
Due from banks.....	33,035 75
Checks and other cash Items	441 85
Cash on hand.....	10,036 05
Expenses	6,573 12
Total.....	\$224,603 99

LIABILITIES.	
Capital paid in.....	\$25,000 00
Surplus fund	5,000 00
Undivided profits	10,679 70
Due to banks.....	9,283 48
Deposits subject to check.	108,018 35
Demand certificates of de- posit	17,071 93
Time certificates of de- posit	37,520 00
Savings deposits	2,030 53
Bills payable	10,000 00
Total.....	\$224,603 99

EPHRATA—GRANT COUNTY BANK.

E. C. DAVIS, *President.*

J. T. WILKINS, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$89,730 95
Overdrafts	133 11
Bonds and warrants.....	22,190 83
Banking house	7,368 50
Furniture and fixtures....	4,977 12
Due from banks.....	25,007 49
Cash on hand.....	4,725 69
Total.....	\$154,133 69

LIABILITIES.	
Capital paid in.....	\$10,000 00
Surplus fund	250 00
Undivided profits	1,516 46
Due to banks.....	461 40
Postal Savings deposits...	504 21
Deposits subject to check.	114,142 85
Demand certificates of de- posit	17,493 68
Cashier's checks	2,381 54
Savings deposits	7,383 55
Total.....	\$154,133 69

GRANT COUNTY—CONTINUED.

HARTLINE—HARTLINE STATE BANK.

H. T. JONES, *President.*MAY S. JONES, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$123,962 78
Overdrafts	953 45
Bonds and warrants.....	5,615 50
Banking house	3,140 00
Furniture and fixtures...	1,902 55
Due from banks.....	32,653 27
Checks and other cash items	359 07
Exchanges for clearing house	229 68
Cash on hand.....	7,021 55
Total.....	\$175,837 85

LIABILITIES.	
Capital paid in.....	\$25,000 00
Surplus fund	5,000 00
Undivided profits	8,074 73
Due to banks.....	3,927 36
Deposits subject to check.	116,169 54
Demand certificates of deposit	17,666 22
Total.....	\$175,837 85

KRUPP—FARMERS BANK OF KRUPP.

M. A. WILEY, *President.*B. F. PAFF, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$88,883 18
Overdrafts	412 32
Bonds and warrants.....	961 32
Banking house	2,000 00
Furniture and fixtures...	1,600 00
Other real estate owned..	966 97
Due from banks.....	7,228 34
Checks and other cash items	7 75
Cash on hand.....	3,139 98
Expenses	3,721 64
Total.....	\$108,921 50

LIABILITIES.	
Capital paid in.....	\$10,000 00
Surplus fund	4,000 00
Undivided profits	3,391 35
Due to banks.....	1,155 63
Deposits subject to check.	56,275 40
Demand certificates of deposit	2,251 35
Time certificates of deposit	21,808 27
Certified checks	39 50
Bills payable	10,000 00
Total.....	\$108,921 50

QUINCY—QUINCY VALLEY STATE BANK.

G. E. SANDERSON, *President.*R. C. WIGHTMAN, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$66,808 85
Overdrafts	636 83
Bonds and warrants.....	10,280 67
Stocks and other securities	316 24
Banking house	2,000 00
Furniture and fixtures...	1,500 00
Other real estate owned..	1,288 30
Due from banks.....	15,299 86
Checks and other cash items	111 04
Cash on hand.....	3,515 50
Total.....	\$101,757 29

LIABILITIES.	
Capital paid in.....	\$10,000 00
Surplus fund	2,500 00
Undivided profits	919 54
Due to banks.....	4,556 03
Deposits subject to check.	65,231 22
Demand certificates of deposit	3,921 79
Cashier's checks	3 65
Time certificates of deposit	14,124 25
Savings deposits	499 81
Certified checks	1 00
Total.....	\$101,757 29

GRANT COUNTY—CONTINUED.

RUFF—RUFF STATE BANK.

M. A. WILEY, *President.*T. R. AMENDE, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$73,068 81	Capital paid in.....	\$10,000 00
Overdrafts	2,576 69	Surplus fund	1,500 00
Bonds and warrants.....	80 83	Undivided profits	3,634 45
Banking house	1,400 00	Deposits subject to check..	55,653 76
Furniture and fixtures.....	1,400 00	Demand certificates of de-	
Due from banks.....	5,111 23	posit	1,645 65
Checks and other cash		Time certificates of de-	
Items	220 10	posit	10,703 97
Cash on hand.....	2,370 07	Certified checks	7 00
Expenses	1,917 10	Bills payable	5,000 00
Total.....	\$88,144 83	Total.....	\$88,144 83

WARDEN—WARDEN STATE BANK.

CHAS. LINDENBERG, *President.*I. H. MULLOWNEY, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$34,594 21	Capital paid in.....	\$10,000 00
Overdrafts	469 52	Surplus fund	2,500 00
Bonds and warrants.....	5,426 55	Undivided profits	1,240 02
Banking house	1,870 00	Deposits subject to check..	23,447 00
Furniture and fixtures....	1,727 03	Demand certificates of de-	
Other real estate owned....	2,364 25	posit	7,389 43
Due from banks.....	2,232 66	Bills payable	5,000 00
Checks and other cash			
Items	102 35		
Cash on hand.....	789 88		
Total.....	\$49,576 45	Total.....	\$49,576 45

WHEELER—WHEELER STATE BANK.

E. C. DAVIS, *President.*J. E. BASSETT, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$39,083 93	Capital paid in.....	\$10,000 00
Overdrafts	288 70	Undivided profits	372 75
Bonds and warrants.....	6,617 03	Deposits subject to check..	32,384 96
Banking house	1,600 00	Demand certificates of de-	
Furniture and fixtures....	1,359 50	posit	8,402 50
Due from banks.....	3,998 08	Cashier's checks	15 00
Checks and other cash		Bills payable	3,000 00
Items	149 87		
Cash on hand.....	1,063 10		
Expenses	15 00		
Total.....	\$54,175 21	Total.....	\$54,175 21

GRANT COUNTY—CONTINUED.

WILSON CREEK—WILSON CREEK STATE BANK.

DONALD URQUHART, *President.*T. CLAUD BENNETT, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$91,244 35	Capital paid in.....	\$15,000 00
Overdrafts	29 81	Surplus fund	3,000 00
Bonds and warrants.....	6,409 64	Undivided profits	4,773 27
Banking house	5,000 00	Deposits subject to check.	56,796 20
Furniture and fixtures...	1,922 50	Demand certificates of de-	
Other real estate owned..	1,800 61	posit	2,106 55
Due from banks.....	12,998 13	Time certificates of de-	
Checks and other cash		posit	41,147 42
items	160 00		
Cash on hand.....	2,890 18		
Expenses	368 22		
Total.....	\$122,823 44	Total.....	\$122,823 44

GRAYS HARBOR COUNTY.

ABERDEEN—ABERDEEN STATE BANK.

GEORGE L. NYERE, *President.*G. W. RIPLEY, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$129,817 45	Capital paid in.....	\$25,000 00
Overdrafts	501 84	Undivided profits	6,096 46
Bonds and warrants	18,856 28	Due to banks.....	9,536 35
Furniture and fixtures...	6,913 16	Deposits subject to check.	76,930 28
Other real estate owned..	4,490 25	Demand certificates of de-	
Due from banks.....	24,809 14	posit	3,990 98
Exchanges for clearing		Time certificates of de-	
house	3,387 17	posit	10,558 85
Cash on hand.....	7,032 65	Savings deposits	70,002 52
Expenses	6,307 50		
Total.....	\$202,115 44	Total.....	\$202,115 44

ABERDEEN—HAYES & HAYES, BANKERS.

F. B. PATTERSON, *President.*W. J. PATTERSON, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts....	\$1,740,373 92	Capital paid in.....	\$250,000 00
Bonds and warrants....	114,258 42	Surplus fund	50,000 00
Banking house	42,103 73	Undivided profits	47,214 55
Other real estate owned.	6,930 83	Dividends unpaid	2,470 00
Due from banks.....	505,210 07	Due to banks.....	31,083 71
Checks and other cash		Postal savings deposits..	24,450 24
items	8,532 48	State deposits	135,000 00
Exchanges for clearing		Deposits subject to check	1,322,685 19
house	11,321 71	Demand certificates of	
Cash on hand.....	72,742 00	deposit	14,952 18
Expenses	33,369 49	Time certificates of de-	
		posit	182,018 82
		Savings deposits	383,707 04
		Certified checks	879 18
		Re-discounts	90,381 74
Total.....	\$2,534,842 65	Total.....	\$2,534,842 65

GRAYS HARBOR COUNTY—CONTINUED.

ABERDEEN—UNITED STATES TRUST COMPANY.

W. J. PATTERSON, *President.*R. C. VANDEVORT, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$200,219 27	Capital paid in.....	\$50,000 00
Overdrafts	79 97	Surplus fund	10,000 00
Bonds and warrants.....	80,681 77	Undivided profits	9,002 37
Stocks and other securities	785 00	Due to banks.....	48,346 00
Furniture and fixtures...	17,500 00	Postal savings deposits...	42,150 00
Other real estate owned..	15,176 00	Deposits subject to check.	144,799 20
Due from banks.....	32,599 29	Demand certificates of de-	
Checks and other cash		posit	2,035 00
Items	246 66	Cashier's checks	27 48
Exchanges for clearing		Time certificates of de-	
house	4,738 45	posit	10,818 65
Cash on hand.....	11,935 65	Savings deposits	50,136 23
Expenses	3,352 87		
Total.....	\$367,314 93	Total.....	\$367,314 93

ELMA—BANK OF ELMA.

A. D. DEVONSHIRE, *President.*E. L. FRANCE, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$150,280 19	Capital paid in.....	\$15,000 00
Overdrafts	83 13	Surplus fund	10,000 00
Bonds and warrants.....	7,289 30	Undivided profits	4,297 72
Banking house	5,500 00	Postal savings deposits...	2,400 74
Furniture and fixtures...	500 00	Deposits subject to check.	119,649 39
Other real estate owned..	2,000 00	Demand certificates of de-	
Due from banks.....	22,055 21	posit	54,818 07
Checks and other cash		Time certificates of de-	
Items	4,856 90	posit	772 75
Cash on hand.....	11,886 05		
Expenses	2,487 89		
Total.....	\$206,938 67	Total.....	\$206,938 67

ELMA—FARMERS' & LUMBERMEN'S BANK.

H. McCLEARY, *President.*W. L. BOOMER, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$89,377 76	Capital paid in.....	\$20,000 00
Bonds and warrants.....	7,139 56	Surplus fund	5,000 00
Furniture and fixtures...	3,000 00	Undivided profits	8,285 11
Due from banks.....	24,328 39	Postal savings deposits...	1,148 17
Exchanges for clearing		State deposits	10,000 00
house	101 80	Deposits subject to check.	55,346 21
Cash on hand.....	15,437 51	Demand certificates of de-	
Expenses	6,528 37	posit	1,081 85
		Time certificates of de-	
		posit	9,514 55
		Savings deposits	35,537 50
Total.....	\$145,913 39	Total.....	\$145,913 39

GRAYS HARBOR COUNTY—CONTINUED.

HOQUIAM—LUMBERMAN'S BANK.

W. E. FERREBEE, *President*:R. E. DAWDY, *Cashier*.

RESOURCES.			LIABILITIES.		
Loans and discounts.....	\$268,228	13	Capital paid in.....	\$100,000	00
Overdrafts	356	80	Surplus fund	12,000	00
Bonds and warrants.....	70,601	62	Undivided profits	8,648	33
Stocks and other securities	600	00	Due to banks.....	6,874	11
Banking house	18,030	66	Postal savings deposits...	8,179	80
Furniture and fixtures...	4,500	00	Deposits subject to check.	278,105	94
Other real estate owned..	4,870	45	Demand certificates of de-		
Due from banks.....	154,022	08	posit	2,795	26
Checks and other cash			Time certificates of de-		
Items	869	30	posit	59,200	93
Exchanges for clearing			Savings deposits	94,215	89
house	1,823	72	Re-discounts	2,100	00
Cash on hand.....	48,217	50			
Total.....	\$572,120	26	Total.....	\$572,120	26

MONTESANO—MONTESANO STATE BANK.

A. D. DEVONSHIRE, *President*.W. H. FRANCE, *Cashier*.

RESOURCES.			LIABILITIES.		
Loans and discounts.....	\$334,377	05	Capital paid in.....	\$50,000	00
Overdrafts	61	50	Surplus fund	50,000	00
Bonds and warrants.....	48,940	53	Undivided profits	10,144	93
Stocks and other securities	458	63	Due to banks.....	18,775	49
Banking house	15,000	00	State deposits	25,000	00
Other real estate owned..	2,210	20	Deposits subject to check.	179,182	55
Due from banks.....	124,765	70	Demand certificates of de-		
Checks and other cash			posit	217,290	57
Items	2,646	89	Cashier's checks	543	97
Cash on hand.....	20,314	05			
Expenses	2,162	96			
Total.....	\$550,937	51	Total.....	\$550,937	51

OAKVILLE—OAKVILLE STATE BANK.

WM. T. PERKINS, *President*.C. C. SCATES, *Cashier*.

RESOURCES.			LIABILITIES.		
Loans and discounts.....	\$24,659	57	Capital paid in.....	\$10,000	00
Bonds and warrants.....	9,951	13	Surplus fund	900	00
Banking house	5,600	00	Undivided profits	777	88
Furniture and fixtures...	850	00	Deposits subject to check.	28,005	22
Due from banks.....	4,195	28	Demand certificates of de-		
Cash on hand.....	1,740	49	posit	10	00
Expenses	2,296	99	Time certificates of de-		
			posit	4,635	24
			Savings deposits	4,965	12
Total.....	\$49,293	46	Total.....	\$49,293	46

ISLAND COUNTY.

LANGLEY—LANGLEY STATE BANK.

CHAS. E. FEEK, *President.*JAMES C. LANGLEY, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$27,917 15	Capital paid in.....	\$10,000 00
Overdrafts	617 04	Surplus fund	1,000 00
Bonds and warrants.....	5,423 81	Undivided profits	2,943 45
Banking house	2,600 00	Deposits subject to check..	20,989 45
Furniture and fixtures....	1,778 10	Demand certificates of de-	
Other real estate owned....	910 27	posit	324 25
Due from banks.....	2,637 22	Time certificates of de-	
Checks and other cash		posit	5,712 48
Items	21 80	Savings deposits	1,077 36
Cash on hand.....	593 89	Certified checks	60 00
Expenses	3,347 59	Re-discounts	739 88
		Bills payable	3,000 00
Total.....	\$45,846 87	Total.....	\$45,846 87

OAK HARBOR—OAK HARBOR STATE BANK.

ROBT. MOODY, *President.*J. M. PRATT, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$39,714 67	Capital paid in.....	\$15,000 00
Overdrafts	41 05	Surplus fund	2,796 75
Bonds and warrants.....	12,855 03	Undivided profits	1,403 52
Banking house	1,400 00	Postal savings deposits....	960 08
Furniture and fixtures....	1,600 00	Deposits subject to check..	35,843 10
Other real estate owned....	793 69	Cashier's checks	618 99
Due from banks.....	6,376 48	Time certificates of de-	
Checks and other cash		posit	9,115 04
Items	40 21	Certified checks	2,000 00
Cash on hand.....	4,040 69		
Expenses	875 66		
Total.....	\$67,737 48	Total.....	\$67,737 48

JEFFERSON COUNTY.

PORT TOWNSEND—MERCHANTS BANK OF PORT TOWNSEND.

W. M. LADD, *President.*N. C. STRONG, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$415,018 63	Capital paid in.....	\$75,000 00
Overdrafts	609 24	Surplus fund	25,000 00
Bonds and warrants.....	108,987 01	Undivided profits	2,238 83
Due from banks.....	95,637 66	Postal savings deposits....	5,601 27
Checks and other cash		Deposits subject to check..	229,387 36
Items	482 38	Demand certificates of de-	
Cash on hand.....	27,390 97	posit	1,104 55
Expenses	49 71	Cashier's checks	154 50
		Time certificates of de-	
		posit	103,612 03
		Savings deposits	206,077 06
Total.....	\$648,175 60	Total.....	\$648,175 60

KING COUNTY.

*AUBURN—CITIZENS STATE BANK.

A. C. MACCALLUM, *President.*WARD M. CARTER, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$70,916 12	Capital paid in.....	\$50,000 00
Overdrafts	561 42	Undivided profits	7,664 57
Bonds and warrants.....	1,928 12	Deposits subject to check..	56,019 39
Banking house	27,680 71	Demand certificates of de-	
Furniture and fixtures...	3,921 90	posit	260 00
Due from banks.....	4,877 36	Time certificates of de-	
Checks and other cash		posit	1,747 00
items	216 37	Savings deposits	5,665 24
Cash on hand.....	4,033 62	Certified checks	270 00
Expenses	7,490 58		
Total.....	\$121,626 20	Total.....	\$121,626 20

* Authorized December, 1914.

*BELLEVUE—STATE BANK OF BELLEVUE.

W. L. COLLIER, *President.*D. E. BIGELOW, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$16,913 00	Capital paid in.....	\$10,000 00
Overdrafts	52	Surplus fund	1,000 00
Bonds and warrants.....	1,097 10	Undivided profits	1,196 57
Furniture and fixtures...	653 65	Deposits subject to check..	15,513 40
Due from banks.....	7,656 82	Demand certificates of de-	
Cash on hand.....	837 49	posit	32 00
Expenses	1,945 18	Cashier's checks	53 95
		Time certificates of de-	
		posit	100 00
		Savings deposits	1,191 88
		Certified checks	15 96
Total.....	\$29,103 76	Total.....	\$29,103 76

* Authorized in November, 1914.

BLACK DIAMOND—STATE BANK OF BLACK DIAMOND.

W. R. PHILLIPS, *President.*JOHN M. LEE, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$28,228 26	Capital paid in.....	\$12,000 00
Bonds and warrants.....	6,964 02	Surplus fund	1,144 60
Furniture and fixtures...	2,118 66	Undivided profits	2,657 19
Other real estate owned...	7,300 00	Deposits subject to check..	18,559 59
Due from banks.....	8,402 17	Demand certificates of de-	
Cash on hand.....	1,617 88	posit	2,349 40
Expenses	3,878 55	Savings deposits	21,798 76
Total.....	\$58,509 54	Total.....	\$58,509 54

KING COUNTY—CONTINUED.

BOTHELL—BOTHELL STATE BANK.

GERT ERICKSEN, *President.*

G. E. HANSON, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$40,688 38	Capital paid in.....	\$12,500 00
Overdrafts	4 56	Surplus fund	2,500 00
Bonds and warrants.....	8,109 92	Undivided profits	2,153 95
Banking house	2,600 00	Deposits subject to check..	31,108 90
Furniture and fixtures....	1,800 00	Demand certificates of de-	
Other real estate owned...	3,651 64	posit	2,229 02
Due from banks.....	14,162 61	Cashier's checks	50
Checks and other cash		Time certificates of deposit	7,476 70
Items	5 00	Savings deposits	16,496 87
Cash on hand.....	2,850 49	Certified checks	17 50
Expenses	1,116 35	Other	505 51
Total.....	\$74,988 95	Total.....	\$74,988 95

DUVALL—DUVALL STATE BANK.

A. H. BOYD, *President.*

C. BEADON HALL, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$36,792 56	Capital paid in.....	\$15,000 00
Overdrafts	53 34	Surplus fund	1,650 00
Bonds and warrants.....	12,373 16	Undivided profits	4,143 80
Banking house	4,578 49	Deposits subject to check..	26,585 23
Furniture and fixtures....	1,500 00	Demand certificates of de-	
Due from banks.....	6,026 55	posit	4,058 63
Cash on hand.....	2,187 63	Cashier's checks	66 25
Expenses	2,552 89	Time certificates of deposit	5,055 85
Total.....	\$66,064 62	Savings deposits	9,504 86
		Total.....	\$66,064 62

ENUMCLAW—PEOPLES STATE BANK.

B. R. KIBLER, *President-Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$94,616 67	Capital paid in.....	\$25,000 00
Overdrafts	27 63	Surplus fund	6,250 00
Bonds and warrants.....	30,427 60	Undivided profits	8,873 04
Banking house	6,100 00	Postal savings deposits...	1,372 09
Furniture and fixtures....	1,916 00	Deposits subject to check.	66,005 34
Due from banks.....	36,790 59	Demand certificates of de-	
Exchanges for clearing		posit	811 57
house	303 31	Time certificates of de-	
Cash on hand.....	7,595 24	posit	22,294 43
Expenses	6,789 14	Savings deposits	53,959 71
Total.....	\$184,566 18	Total.....	\$184,566 18

KING COUNTY—CONTINUED.

ENUMCLAW—STATE BANK OF ENUMCLAW.

S. LAFROMBOISE, *President.*A. C. JOHANSEN, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$109,202 25
Overdrafts	95 33
Bonds and warrants.....	47,891 35
Furniture and fixtures...	3,678 00
Due from banks.....	44,867 23
Checks and other cash items	250 68
Cash on hand.....	10,943 46
Expenses	7,697 94
Total.....	\$224,626 24

LIABILITIES.	
Capital paid in.....	\$30,000 00
Surplus fund	6,000 00
Undivided profits	8,377 98
Postal savings deposits...	1,820 51
State deposits	5,000 00
Deposits subject to check.	91,896 52
Demand certificates of de- posit	2,358 25
Cashier's checks	15 26
Time certificates of de- posit	25,445 53
Savings deposits	53,712 19
Total.....	\$224,626 24

ISSAQUAH—ISSAQUAH STATE BANK.

HERMAN C. SCHULTZ, *President.*A. J. PETERS, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$83,014 68
Overdrafts	65 91
Bonds and warrants.....	5,612 52
Banking house	17,500 00
Furniture and fixtures...	4,500 00
Other real estate owned..	832 57
Due from banks.....	17,189 42
Checks and other cash items	246 53
Cash on hand.....	4,362 09
Expenses	4,781 05
Total.....	\$138,104 77

LIABILITIES.	
Capital paid in.....	\$25,000 00
Surplus fund	250 00
Undivided profits	7,993 67
Deposits subject to check.	51,855 77
Demand certificates of de- posit	435 00
Cashier's checks	521 92
Time certificates of de- posit	8,277 48
Savings deposits	43,770 93
Total.....	\$138,104 77

KENT—STATE BANK OF KENT.

W. H. OVERLOCK, *President.*CHAS. R. OTEY, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$159,101 85
Overdrafts	24 32
Bonds and warrants.....	17,971 42
Banking house	12,500 00
Due from banks.....	59,327 99
Checks and other cash items	828 83
Cash on hand.....	6,705 15
Expenses	10,889 58
Total.....	\$267,349 14

LIABILITIES.	
Capital paid in.....	\$40,000 00
Surplus fund	10,000 00
Undivided profits	14,154 53
Postal savings deposits...	1,759 59
Deposits subject to check.	124,828 57
Demand certificates of de- posit	1,942 83
Cashier's checks	3,543 93
Time certificates of de- posit	15,771 59
Savings deposits	55,348 10
Total.....	\$267,349 14

KING COUNTY—CONTINUED.

KIRKLAND—KIRKLAND STATE BANK.

HERMAN C. SCHULTZ, *President.*

GLENN M. JOHNSON, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$31,336 33
Overdrafts	258 25
Bonds and warrants.....	17,739 74
Furniture and fixtures....	1,606 38
Due from banks.....	7,937 56
Checks and other cash items	268 25
Cash on hand.....	1,583 53
Expenses	3,873 68
Total.....	\$64,603 70

LIABILITIES.	
Capital paid in.....	\$10,000 00
Surplus fund	1,000 00
Undivided profits	3,303 95
Due to banks.....	2,187 12
Deposits subject to check..	38,780 80
Demand certificates of deposit	220 00
Cashier's checks	208 84
Time certificates of deposit	3,733 50
Savings deposits	5,113 02
Certified checks	56 47
Total.....	\$64,603 70

NORTH BEND—STATE BANK OF NORTH BEND.

W. H. TAYLOR, *President.*

LOY E. CARLIN, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$23,126 12
Overdrafts	9 62
Bonds and warrants.....	10,567 58
Banking house	3,100 00
Furniture and fixtures....	2,157 46
Other real estate owned...	1,100 00
Due from banks.....	10,835 77
Cash on hand.....	721 81
Expenses	451 07
Total.....	\$52,069 43

LIABILITIES.	
Capital paid in.....	\$10,000 00
Surplus fund	200 00
Undivided profits	499 21
Deposits subject to check..	27,381 40
Demand certificates of deposit	199 75
Time certificates of deposit	3,528 02
Savings deposits	10,261 05
Total.....	\$52,069 43

REDMOND—REDMOND STATE BANK.

F. M. ROBERTS, *President.*

C. A. SHINSTROM, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$79,332 57
Overdrafts	56 92
Bonds and warrants.....	7,413 75
Banking house	3,217 01
Furniture and fixtures...	60 10
Due from banks.....	8,274 14
Cash on hand.....	2,652 47
Total.....	\$101,006 96

LIABILITIES.	
Capital paid in.....	\$10,000 00
Surplus fund	1,500 00
Undivided profits	2,209 39
Deposits subject to check..	54,558 89
Demand certificates of deposit	590 75
Time certificates of deposit	3,099 65
Savings deposits	29,048 28
Total.....	\$101,006 96

KING COUNTY—CONTINUED.

RENTON—CITIZENS BANK OF RENTON.

H. EVANS, *President.*R. W. GILHAM, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$165,164 39
Overdrafts	958 77
Bonds and warrants.....	18,549 70
Banking house	8,600 00
Furniture and fixtures...	3,500 00
Other real estate owned..	553 11
Due from banks.....	42,778 36
Checks and other cash	
Items	106 40
Cash on hand.....	9,661 87
Expenses	3,673 02
Total.....	\$253,545 62

LIABILITIES.	
Capital paid in.....	\$25,000 00
Surplus fund	1,000 00
Undivided profits	8,040 68
Deposits subject to check.	114,557 26
Demand certificates of de-	
posit	2,171 22
Cashier's checks	2,187 14
Time certificates of de-	
posit	17,087 78
Savings deposits	83,480 70
Certified checks	20 86
Total.....	\$253,545 62

SEATTLE—AMERICAN SAVINGS BANK & TRUST COMPANY.

J. P. GLEASON, *President.*JOHN K. BUSH, *Cashier.*

RESOURCES.	
Loans and discounts....	\$1,340,186 64
Overdrafts	127 78
Bonds and warrants....	85,632 56
Stocks and other securi-	
ties	30,093 26
Banking house	750,000 00
Furniture and fixtures...	25,220 36
Other real estate owned.	24,730 31
Due from banks.....	356,387 99
Checks and other cash	
Items	6,083 91
Exchanges for clearing	
house	13,208 27
Cash on hand.....	164,975 59
Expenses	46,820 53
Safe deposit vaults.....	14,400 00
Total.....	\$2,866,867 20

LIABILITIES.	
Capital paid in.....	\$600,000 00
Surplus fund	100,000 00
Undivided profits	70,396 68
Dividends unpaid	67 50
Due to banks.....	153,355 64
Postal savings deposits..	5,000 00
State deposits	100,000 00
Deposits subject to check	881,086 97
Demand certificates of	
deposit	12,942 73
Cashier's checks	18,713 73
Time certificates of de-	
posit	44,841 88
Savings deposits	877,786 40
Certified checks	2,675 67
Total.....	\$2,866,867 20

SEATTLE—BANK FOR SAVINGS IN SEATTLE.

DANIEL KELLEHER, *President.*O. H. P. LAFARGE, *Secretary.*

RESOURCES.	
Loans and discounts....	\$419,251 68
Bonds and warrants....	346,404 03
Furniture and fixtures..	16,000 00
Other real estate owned.	258,665 95
Due from banks.....	48,493 90
Checks and other cash	
Items	90 81
Exchanges for clearing	
house	765 00
Cash on hand.....	4,590 72
Total.....	\$1,094,262 09

LIABILITIES.	
Capital paid in.....	\$400,000 00
Surplus fund	12,000 00
Undivided profits	3,678 85
Postal savings deposits..	30,764 86
Demand certificates of	
deposit	2,435 21
Time certificates of de-	
posit	30,928 53
Savings deposits	614,454 64
Total.....	\$1,094,262 09

KING COUNTY—CONTINUED.

SEATTLE—BROADWAY STATE BANK.

W. R. PHILLIPS, *President.*G. B. WALKER, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$164,370 38	Capital paid in.....	\$25,000 00
Overdrafts	4,920 52	Surplus fund	5,000 00
Bonds and warrants.....	2,600 00	Due to banks.....	7,500 00
Furniture and fixtures...	5,468 28	Deposits subject to check.	125,248 87
Other real estate owned..	2,939 48	Demand certificates of de-	
Due from banks.....	5,820 43	posit	60 00
Checks and other cash		Cashier's checks	5,692 30
items	5,025 00	Time certificates of de-	
Exchanges for clearing		posit	12,438 15
house	6,507 56	Savings deposits	37,479 18
Cash on hand.....	18,238 11	Certified checks	23 00
Expenses	2,551 74		
Total.....	\$218,441 50	Total.....	\$218,441 50

SEATTLE—CANADIAN BANK OF COMMERCE.

GEORGE H. BELT, *Acting Manager.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$1,604,909 50	Capital paid in.....	\$200,000 00
Overdrafts	353 51	Undivided profits	49,837 20
Bonds and warrants.....	381,712 82	Due to banks.....	342,475 45
Stocks and other securi-		Deposits subject to check	877,776 12
ties	10,501 00	Demand certificates of	
Due from banks.....	969,622 66	deposit	1,320 00
Checks and other cash		Cashier's checks	14,320 66
items	10,849 96	Time certificates of de-	
Exchanges for clearing		posit	40,366 67
house	42,293 47	Savings deposits	1,852,195 90
Cash on hand.....	343,923 35	Certified checks	6,008 59
Expenses	20,134 32		
Total.....	\$3,384,300 59	Total.....	\$3,384,300 59

SEATTLE—CITIZENS BANK OF GEORGETOWN.

CECIL H. UPPER, *President.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$102,003 23	Capital paid in.....	\$25,000 00
Stocks and other securi-		Undivided profits	3,723 91
ties	4,400 00	Due to banks.....	2,985 67
Furniture and fixtures...	3,257 50	Deposits subject to check.	65,330 56
Other real estate owned..	9,784 66	Demand certificates of de-	
Due from banks.....	480 88	posit	37 66
Checks and other cash		Time certificates of de-	
items	4,042 95	posit	7,350 00
Cash on hand.....	3,683 95	Savings deposits	24,631 28
Expenses	11,405 91	Bills payable	10,000 00
Total.....	\$139,059 08	Total.....	\$139,059 08

KING COUNTY—CONTINUED.

SEATTLE—DEXTER HORTON TRUST & SAVINGS BANK.

C. J. SMITH, *President.*W. W. SCRUBY, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts....	\$2,453,338 03	Capital paid in.....	\$400,000 00
Bonds and warrants....	2,515,217 68	Surplus fund	80,000 00
Stocks and other securities	15,695 77	Undivided profits	140,417 41
Furniture and fixtures..	26,000 00	Postal savings deposits..	37,005 64
Other real estate owned..	492,312 82	Deposits subject to check	200,257 74
Due from banks.....	1,690,758 90	Demand certificates of deposit	122 75
Checks and other cash items	159 62	Cashier's checks	14,172 16
Exchanges for clearing house	732 50	Time certificates of deposit	4,500 00
Cash on hand.....	377,383 09	Savings deposits	6,679,915 55
Expenses	5,391 35	Certified checks	23 92
		Trust funds	20,574 59
Total.....	\$7,576,989 76	Total.....	\$7,576,989 76

SEATTLE—FREMONT STATE BANK.

C. E. REMSBERG, *President.*J. HARWOOD MORRIS, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$152,009 28	Capital paid in.....	\$50,000 00
Overdrafts	840 37	Surplus fund	3,500 00
Bonds and warrants.....	748 35	Undivided profits	4,944 47
Furniture and fixtures...	1,700 00	Deposits subject to check.	64,016 84
Other real estate owned..	27,799 07	Demand certificates of deposit	2,309 02
Due from banks.....	27,462 92	Cashier's checks	196 50
Checks and other cash items	466 69	Time certificates of deposit	10,877 36
Cash on hand.....	5,966 22	Savings deposits	65,331 46
Expenses	9,682 75	Bills payable	25,500 00
Total.....	\$226,675 65	Total.....	\$226,675 65

SEATTLE—GERMAN-AMERICAN MERCANTILE BANK.

ERNEST CARSTENS, *President.*I. J. RILEY, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts....	\$1,058,753 09	Capital paid in.....	\$200,000 00
Overdrafts	11,463 88	Surplus fund	6,000 00
Bonds and warrants....	116,127 98	Undivided profits	28,255 47
Stocks and other securities	10,573 00	Due to banks.....	74,078 58
Furniture and fixtures..	18,983 92	State deposits	55,000 00
Other real estate owned..	42,432 05	Deposits subject to check	661,633 33
Due from banks.....	142,979 36	Demand certificates of deposit	6,292 83
Checks and other cash items	4,222 78	Cashier's checks	45,054 04
Exchanges for clearing house	19,162 00	Time certificates of deposit	54,267 28
Cash on hand.....	24,010 31	Savings deposits	303,416 05
Expenses	22,010 21	Certified checks	3,021 00
Leasehold	4,000 00	Re-discounts	3,500 00
		Bills payable	25,000 00
		Bonds borrowed	9,200 00
Total.....	\$1,474,718 58	Total.....	\$1,474,718 58

KING COUNTY—CONTINUED.

SEATTLE—GREEN LAKE STATE BANK.

GEO. W. LEAR, *President.*LOUIS K. LEAR, *Cashier.*

RESOURCES.			LIABILITIES.		
Loans and discounts.....	\$55,343	01	Capital paid in.....	\$25,000	00
Overdrafts	7	82	Surplus fund	5,000	00
Bonds and warrants.....	54,583	02	Undivided profits	6,211	59
Stocks and other securities	4,419	15	State deposits	30,000	00
Banking house	18,288	50	Deposits subject to check.	52,750	52
Furniture and fixtures....	3,993	25	Demand certificates of de-		
Due from banks.....	24,231	39	posit	2,521	20
Checks and other cash			Cashier's checks	14,111	39
items	74	64	Time certificates of de-		
Exchanges for clearing			posit	31,771	85
house	1,463	97	Savings deposits	57	57
Cash on hand.....	3,152	72			
Expenses	1,866	65			
Total.....	\$167,424	12	Total.....	\$167,424	12

*SEATTLE—GUARDIAN SAVINGS BANK.

JOSEPH E. THOMAS, *President.*THOS. H. KOLDERUP, *Cashier.*

RESOURCES.			LIABILITIES.		
Loans and discounts.....	\$89,680	35	Capital paid in.....	\$80,000	00
Overdrafts	46	51	Undivided profits	2,651	19
Bonds and warrants.....	41,236	24	Deposits subject to check.	42,353	80
Furniture and fixtures...	3,228	40	Demand certificates of de-		
Due from banks.....	40,536	96	posit	100	00
Checks and other cash			Cashier's checks	13,588	44
items	96	00	Time certificates of de-		
Exchanges for clearing			posit	27,890	00
house	1,152	87	Savings deposits	13,664	99
Cash on hand.....	3,728	06	Certified checks	32	25
Other	575	28			
Total.....	\$180,280	67	Total.....	\$180,280	67

* Authorized August, 1915.

SEATTLE—JAPANESE COMMERCIAL BANK.

M. FURUYA, *President.*M. MATSUMOTO, *Cashier.*

RESOURCES.			LIABILITIES.		
Loans and discounts.....	\$370,984	33	Capital paid in.....	\$50,000	00
Overdrafts	482	82	Undivided profits	65,953	63
Bonds and warrants.....	24,194	27	Due to banks.....	3,530	17
Furniture and fixtures...	2,000	00	Postal savings deposits...	2,186	74
Due from banks.....	154,149	77	Deposits subject to check.	86,175	23
Checks and other cash			Demand certificates of de-		
items	2,688	78	posit	26,871	14
Cash on hand.....	26,062	96	Cashier's checks	5,637	93
Expenses	12,250	89	Time certificates of de-		
			posit	76,319	11
			Savings deposits	276,129	89
			Certified checks	9	98
Total.....	\$592,813	82	Total.....	\$592,813	82

KING COUNTY—CONTINUED.

SEATTLE—KING COUNTY STATE BANK.

J. F. RANNING, *President.*R. W. GREEN, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$83,566 20
Overdrafts	805 22
Bonds and warrants.....	1,408 24
Furniture and fixtures...	4,113 50
Other real estate owned..	2,600 00
Due from banks.....	14,546 15
Checks and other cash items	1,423 34
Cash on hand.....	8,541 27
Expenses	5,087 44
Total.....	\$122,091 36

LIABILITIES.	
Capital paid in.....	\$30,000 00
Surplus fund	1,500 00
Undivided profits	4,846 47
Deposits subject to check.	62,419 03
Demand certificates of deposit	5,371 75
Cashier's checks	897 31
Time certificates of deposit	1,075 00
Savings deposits	15,975 80
Certified checks	6 00
Total.....	\$122,091 36

SEATTLE—METROPOLITAN BANK.

H. C. HENRY, *President.*R. P. LOOMIS, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$1,200,024 30
Overdrafts	144 36
Bonds and warrants.....	116,192 71
Stocks and other securities	100 00
Furniture and fixtures..	10,250 94
Due from banks.....	857,605 84
Checks and other cash items	3,340 59
Exchanges for clearing house	23,759 02
Cash on hand.....	226,782 83
Total.....	\$2,438,200 59

LIABILITIES.	
Capital paid in.....	\$100,000 00
Surplus fund	120,000 00
Undivided profits	34,253 19
Due to banks.....	146,507 01
Postal savings deposits..	17,447 64
State deposits	95,000 00
Deposits subject to check	1,263,041 48
Demand certificates of deposit	930 65
Cashier's checks	3,619 91
Time certificates of deposit	447,709 54
Savings deposits	199,924 57
Certified checks	9,766 60
Total.....	\$2,438,200 59

SEATTLE—MORTGAGE TRUST & SAVINGS BANK.

WM. P. HARPER, *President.*PAUL C. HARPER, *Secretary.*

RESOURCES.	
Loans and discounts.....	\$120,019 49
Overdrafts	283 00
Bonds and warrants.....	2,498 08
Stocks and other securities	6,952 48
Furniture and fixtures...	2,107 93
Other real estate.....	28,127 20
Due from banks.....	16,146 88
Checks and other cash items	4,070 69
Cash on hand.....	2,359 39
Expenses	2,449 61
Total.....	\$185,014 75

LIABILITIES.	
Capital paid in.....	\$100,000 00
Surplus fund	3,700 00
Undivided profits	5,084 13
Deposits subject to check.	16,137 67
Demand certificates of deposit	12,529 86
Cashier's checks	1,264 70
Savings deposits	46,298 39
Total.....	\$185,014 75

KING COUNTY—CONTINUED.

SEATTLE—NORTHERN BANK & TRUST COMPANY.

W. R. PHILLIPS, *President.*W. L. COLLIER, *Cashier.*

RESOURCES.		
Loans and discounts....	\$863,794	82
Overdrafts	6,047	91
Bonds and warrants....	167,181	77
Stocks and other securities	158,159	13
Furniture and fixtures..	26,538	52
Other real estate owned.	32,450	47
Due from banks.....	99,609	59
Checks and other cash items	19,673	09
Exchanges for clearing house	31,173	49
Cash on hand.....	87,311	32
Total.....	\$1,491,940	11

LIABILITIES.		
Capital paid in.....	\$100,000	00
Surplus fund	20,000	00
Undivided profits	4,076	00
Dividends unpaid	20	00
Due to banks.....	54,444	67
State deposits	25,000	00
Deposits subject to check	707,773	10
Demand certificates of deposit	5,031	83
Cashier's checks	6,406	10
Time certificates of deposit	16,610	62
Savings deposits	466,297	65
Certified checks	2,765	23
Bills payable	83,000	00
Other	515	00
Total.....	\$1,491,940	11

SEATTLE—NORTH SIDE STATE BANK.

A. J. GODDARD, *President.*HARRY WELTY, *Cashier.*

RESOURCES.		
Loans and discounts.....	\$18,719	54
Overdrafts	310	47
Bonds and warrants.....	9,955	25
Furniture and fixtures....	1,590	00
Other real estate owned...	70	73
Due from banks.....	5,605	94
Cash on hand.....	2,645	71
Total.....	\$38,897	64

LIABILITIES.		
Capital paid in.....	\$10,000	00
Undivided profits	56	97
Deposits subject to check..	21,278	31
Demand certificates of deposit	158	00
Time certificates of deposit	1,550	00
Savings deposits	5,854	36
Total.....	\$38,897	64

SEATTLE—NORTHWEST TRUST & SAFE DEPOSIT COMPANY.

E. SHORROCK, *President.*J. V. A. SMITH, *Cashier.*

RESOURCES.		
Loans and discounts....	\$668,033	31
Overdrafts	380	73
Bonds and warrants....	292,671	54
Stocks and other securities	2,676	51
Safe deposit equipment..	15,000	00
Furniture and fixtures..	18,546	91
Other real estate owned.	43,112	99
Due from banks.....	139,580	71
Checks and other cash items	14,188	70
Exchanges for clearing house	9,538	29
Cash on hand.....	79,230	66
Accrued interest	4,176	08
Expenses	29,185	31
Total.....	\$1,316,321	74

LIABILITIES.		
Capital paid in.....	\$100,000	00
Surplus fund	7,200	00
Undivided profits	41,578	24
Due to banks.....	12,246	52
Postal savings deposits..	8,330	55
Deposits subject to check	633,389	48
Demand certificates of deposit	460	04
Cashier's checks	9,236	83
Time certificates of deposit	18,155	30
Savings deposits	484,611	67
Certified checks	1,113	11
Total.....	\$1,316,321	74

KING COUNTY—CONTINUED.

SEATTLE—THE ORIENTAL-AMERICAN BANK.

M. FURUYA, *President.*H. HASEGAMA, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$86,539 08	Capital paid in.....	\$40,000 00
Overdrafts	372 19	Undivided profits	16,163 13
Banking house	48,164 08	Due to banks.....	12,478 22
Furniture and fixtures...	3,770 37	Deposits subject to check.	35,420 42
Other real estate owned..	70,000 00	Demand certificates of de-	
Due from banks.....	31,856 73	posit	8,553 54
Checks and other cash		Cashier's checks	1,549 87
items	384 16	Time certificates of de-	
Cash on hand.....	10,497 13	posit	31,707 11
Expenses	11,067 74	Savings deposits	91,604 19
		Certified checks	175 00
		Bills payable	25,000 00
Total.....	\$262,651 48	Total.....	\$262,651 48

SEATTLE—PEOPLES SAVINGS BANK.

E. C. NEUFELDER, *President.*JOS. T. GREENLEAF, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts....	\$733,706 71	Capital paid in.....	\$100,000 00
Overdrafts	215 83	Surplus fund	20,000 00
Bonds and warrants....	112,178 52	Undivided profits	231,644 49
Stocks and other securi-		Deposits subject to check	571,042 54
ties	70,200 00	Demand certificates of	
Banking house	404,054 98	deposit	8,820 37
Other real estate owned.	415,771 50	Savings deposits	1,626,367 25
Due from banks.....	518,647 57	Certified checks	584 55
Checks and other cash			
items	3,773 28		
Exchanges for clearing			
house	17,761 47		
Cash on hand.....	282,149 34		
Total.....	\$2,558,459 20	Total.....	\$2,558,459 20

SEATTLE—RAINIER VALLEY STATE BANK.

S. T. TOBY, *President.*H. W. TANEY, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$91,931 59	Capital paid in.....	\$25,000 00
Bonds and warrants.....	47,209 71	Surplus fund	3,500 00
Banking house	20,000 00	Undivided profits	14,954 98
Furniture and fixtures...	2,800 00	Postal savings deposits...	1,385 64
Other real estate owned..	3,000 00	Deposits subject to check.	117,912 49
Due from banks.....	22,103 76	Demand certificates of de-	
Cash on hand.....	3,055 56	posit	230 00
Expenses	15,127 30	Cashier's checks	1,275 35
		Time certificates of de-	
		posit	1,104 00
		Savings deposits	39,071 16
		Certified checks	794 30
Total.....	\$205,227 92	Total.....	\$205,227 92

KING COUNTY—CONTINUED.

SEATTLE—SCANDINAVIAN AMERICAN BANK.

J. E. CHILBERG, *President.*

J. F. LANE, *Cashier.*

RESOURCES.		
Loans and discounts....	\$6,572,412	31
Overdrafts	15,247	89
Bonds and warrants....	2,573,965	97
Stocks and other securi- ties	207,081	87
Furniture and fixtures..	37,500	00
Other real estate owned.	300,291	01
Due from banks.....	1,763,372	18
Checks and other cash items	59,273	34
Exchanges for clearing house	101,972	66
Cash on hand.....	844,898	69
Expenses	105,208	00
Other	2,000	00
Total.....	\$12,583,223	92

LIABILITIES.		
Capital paid in.....	\$500,000	00
Surplus fund	500,000	00
Undivided profits	169,052	69
Dividends unpaid	150	00
Due to banks.....	1,254,940	93
Postal savings deposits..	32,157	34
State deposits	150,080	75
Deposits subject to check	2,619,729	98
Demand certificates of deposit	44,982	98
Cashier's checks	55,110	07
Time certificates of de- posit	454,548	06
Savings deposits	6,777,157	69
Certified checks	23,313	43
Other	2,000	00
Total.....	\$12,583,223	92

SEATTLE—SPECIE BANK OF SEATTLE.

J. T. KIKUTAKE, *President.*

C. M. UYEDA, *Cashier.*

RESOURCES.		
Loans and discounts.....	\$68,714	14
Overdrafts	84	03
Furniture and fixtures...	3,185	26
Due from banks.....	13,592	51
Exchanges for clearing house	6,201	86
Cash on hand.....	8,187	39
Expenses	6,879	23
Total.....	\$101,844	42

LIABILITIES.		
Capital paid in.....	\$25,000	00
Undivided profits	5,906	61
Deposits subject to check.	30,287	91
Demand certificates of de- posit	4,025	14
Cashier's checks	858	81
Time certificates of de- posit	7,477	02
Savings deposits	27,892	23
Certified checks	396	70
Total.....	\$101,844	42

SEATTLE—THE STATE BANK OF SEATTLE.

E. L. GRONDAHL, *President.*

HUGO CARLSON, *Cashier.*

RESOURCES.		
Loans and discounts.....	\$881,317	61
Overdrafts	949	45
Bonds and warrants....	172,388	83
Stocks and other securi- ties	1,885	00
Furniture and fixtures..	20,000	00
Other real estate owned.	30,331	51
Due from banks.....	246,074	17
Checks and other cash items	32,150	16
Exchanges for clearing house	10,938	96
Cash on hand.....	95,126	43
Expenses	39,473	04
Total.....	\$1,530,635	16

LIABILITIES.		
Capital paid in.....	\$100,000	00
Surplus fund	20,000	00
Undivided profits	32,360	02
Dividends unpaid	90	00
Due to banks.....	92,443	43
Postal savings deposits..	5,000	00
State deposits	25,000	00
Deposits subject to check	655,691	04
Demand certificates of deposit	73,175	33
Cashier's checks	4,343	57
Time certificates of de- posit	14,866	39
Savings deposits	504,432	75
Certified checks	3,232	63
Total.....	\$1,530,635	16

KING COUNTY—CONTINUED.

SEATTLE—UNION SAVINGS AND TRUST COMPANY.

JAMES D. HOGE, *President.*N. B. SOLNER, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$2,564,601 43	Capital paid in.....	\$600,000 00
Overdrafts	2,326 20	Surplus fund	150,000 00
Bonds and warrants.....	702,068 55	Undivided profits	154,235 73
Stocks and other securities	35,299 67	Dividends unpaid	143 00
Banking house	350,000 00	Due to banks.....	393,210 22
Furniture and fixtures..	8,083 00	Postal savings deposits..	19,568 80
Other real estate owned..	144,997 01	State deposits	65,000 00
Due from banks.....	863,679 71	Deposits subject to check	1,812,555 80
Checks and other cash items	19,001 44	Demand certificates of deposit	27,359 21
Exchanges for clearing house	43,458 71	Cashier's checks	8,564 66
Cash on hand.....	402,408 49	Time certificates of deposit	128,309 96
Expenses	100,152 62	Savings deposits	1,872,064 37
		Certified checks	5,065 08
Total.....	\$5,236,076 83	Total.....	\$5,236,076 83

SEATTLE—UNIVERSITY STATE BANK.

GEO. W. LEAR, *President.*HARRY B. LEAR, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$286,195 30	Capital paid in.....	\$50,000 00
Overdrafts	1 70	Surplus fund	1,000 00
Bonds and warrants.....	162,294 21	Undivided profits	2,751 80
Stocks and other securities	11,898 96	Due to banks.....	14,956 66
Banking house	25,477 40	Postal savings deposits..	1,544 23
Furniture and fixtures...	11,902 56	State deposits	60,000 00
Other real estate owned..	1,552 93	Deposits subject to check.	313,229 64
Due from banks.....	113,199 41	Demand certificates of deposit	3,669 82
Checks and other cash items	1,912 75	Cashier's checks	811 96
Cash on hand.....	20,957 01	Time certificates of deposit	34,812 44
		Savings deposits	151,192 42
		Certified checks	1,423 26
Total.....	\$635,392 23	Total.....	\$635,392 23

SEATTLE—WEST SEATTLE STATE BANK.

W. T. CAMPBELL, *President.*J. B. CAMPBELL, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$21,453 37	Capital paid in.....	\$10,700 00
Overdrafts	161 02	Undivided profits	3,785 64
Bonds and warrants.....	18,687 38	Deposits subject to check..	41,662 49
Furniture and fixtures...	3,487 90	Demand certificates of deposit	105 80
Other real estate owned...	3,575 28	Cashier's checks	781 48
Due from banks.....	10,425 46	Time certificates of deposit	726 30
Checks and other cash items	126 10	Savings deposits	4,529 35
Cash on hand.....	1,613 26	Bills payable	600 00
Expenses	3,361 29		
Total.....	\$62,891 06	Total.....	\$62,891 06

KING COUNTY—CONTINUED.

TOLT—TOLT STATE BANK.

E. B. COWLES, *President.*F. P. SEARLE, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$42,646 23	Capital paid in.....	\$10,000 00
Overdrafts	195 17	Surplus fund	1,500 00
Bonds and warrants.....	6,921 76	Undivided profits	1,957 04
Banking house	1,708 38	Dividends unpaid	400 00
Furniture and fixtures....	2,126 58	Deposits subject to check..	38,286 21
Due from banks.....	4,298 23	Demand certificates of de-	
Checks and other cash		posit	427 02
items	25 00	Cashier's checks	22 00
Cash on hand.....	4,020 67	Time certificates of deposit	3,270 06
Expenses	1,308 91	Savings deposits	7,388 60
Total.....	\$63,250 93	Total.....	\$63,250 93

VASHON—VASHON STATE BANK.

L. W. LEWIS, *President.*T. HANSEN, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$53,119 55	Capital paid in.....	\$10,000 00
Overdrafts	6 35	Surplus fund	2,000 00
Bonds and warrants	15,199 14	Undivided profits	1,311 99
Banking house	2,500 00	Postal savings deposits....	381 96
Furniture and fixtures....	1,850 00	Deposits subject to check..	49,166 62
Other real estate owned...	1,854 02	Demand certificates of de-	
Due from banks.....	13,980 42	posit	936 66
Cash on hand.....	2,699 27	Time certificates of deposit	19,868 51
Expenses	398 34	Savings deposits	7,941 35
Total.....	\$91,607 09	Total.....	\$91,607 09

KITSAP COUNTY.

BREMERTON—BREMERTON TRUST & SAVINGS BANK.

GEO. E. MILLER, *President.*D. L. BUREN, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$72,988 49	Capital paid in.....	\$25,000 00
Overdrafts	21 88	Undivided profits	2,832 73
Bonds and warrants.....	19,076 38	State deposits	10,000 00
Furniture and fixtures....	5,971 90	Deposits subject to check..	53,570 13
Due from banks.....	16,996 23	Demand certificates of de-	
Checks and other cash		posit	30 00
items	1,206 69	Cashier's checks	660 45
Cash on hand.....	5,209 64	Time certificates of de-	
Expenses	2,424 52	posit	7,369 35
Total.....	\$123,895 73	Savings deposits	24,433 07
		Total.....	\$123,895 73

KITSAP COUNTY—CONTINUED.

BREMERTON—CITIZENS BANK OF BERMERTON.

S. MIGLIAVACCA, *President.*ERNEST C. EBERT, *Cashier.*

RESOURCES.		
Loans and discounts.....	\$70,590	79
Overdrafts	95	77
Bonds and warrants.....	103,821	12
Banking house	30,000	00
Furniture and fixtures...	4,068	00
Due from banks.....	26,890	53
Checks and other cash items	424	28
Cash on hand.....	12,383	03
Expenses	13,652	20
Total.....	\$261,925	72

LIABILITIES.		
Capital paid in.....	\$50,000	00
Surplus fund	6,600	00
Undivided profits	15,455	97
Postal savings deposits...	19,696	51
Deposits subject to check.	80,322	11
Demand certificates of deposit	598	07
Cashier's checks	1,320	69
Time certificates of deposit	9,594	45
Savings deposits	78,337	92
Total.....	\$261,925	72

CHARLESTON—STATE BANK OF CHARLESTON.

F. J. CARVER, *President.*A. E. GALBRAITH, *Cashier.*

RESOURCES.		
Loans and discounts.....	\$18,472	74
Overdrafts	24	
Bonds and warrants.....	16,190	09
Banking house	4,889	01
Furniture and fixtures....	1,811	23
Due from banks.....	75	99
Cash on hand.....	3,190	13
Expenses	1,953	66
Total.....	\$46,583	09

LIABILITIES.		
Capital paid in.....	\$15,000	00
Undivided profits	2,552	37
Deposits subject to check..	23,857	59
Demand certificates of deposit	530	00
Cashier's checks	296	70
Savings deposits	4,346	43
Total.....	\$46,583	09

PORT ORCHARD—KITSAP COUNTY BANK.

GEO. E. MILLER, *President.*W. W. BONER, *Cashier.*

RESOURCES.		
Loans and discounts.....	\$63,595	22
Overdrafts	40	45
Bonds and warrants.....	34,657	62
Stocks and other securities	1,021	75
Banking house	5,153	70
Furniture and fixtures...	2,350	68
Other real estate owned..	9,820	33
Due from banks.....	14,635	89
Checks and other cash items	1,659	58
Cash on hand.....	2,639	88
Expenses	1,311	05
Total.....	\$136,886	15

LIABILITIES.		
Capital paid in.....	\$20,000	00
Surplus fund	2,000	00
Undivided profits	5,559	69
Postal savings deposits...	5,139	04
State deposits	20,000	00
Deposits subject to check.	51,906	12
Cashier's checks	1,182	29
Time certificates of deposit	2,664	78
Savings deposits	28,385	48
Certified checks	48	75
Total.....	\$136,886	15

KITSAP COUNTY—CONTINUED.

POULSBO—LIBERTY BAY BANK.

WM. THAANUM, *President.*

VALDEMAR HOLM, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$81,217 88	Capital paid in.....	\$10,000 00
Bonds and warrants.....	31,895 14	Surplus fund	2,000 00
Banking house	1,742 80	Undivided profits	5,491 87
Furniture and fixtures...	1,350 00	State deposits	2,032 59
Other real estate owned..	225 00	Deposits subject to check.	32,772 64
Due from banks.....	19,982 47	Demand certificates of de-	
posits		posit	5,768 57
Checks and other cash		Time certificates of de-	
items	269 69	posit	783 59
Cash on hand.....	7,453 94	Savings deposits	85,845 90
Expenses	522 81	Certified checks	300 00
Other	335 48		
Total.....	\$144,995 16	Total.....	\$144,995 16

KITTITAS COUNTY.

CLE ELUM—CLE ELUM STATE BANK.

FRANK CARPENTER, *President.*

L. R. NELSON, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$243,739 03	Capital paid in	\$50,000 00
Overdrafts	1,023 14	Surplus fund	10,000 00
Bonds and warrants.....	100,057 42	Undivided profits	7,315 09
Stocks and other securities	545 67	Due to banks.....	158,378 76
Banking house	11,100 00	Postal savings deposits...	52,843 69
Furniture and fixtures...	2,200 00	Deposits subject to check.	45,214 47
Other real estate owned..	820 18	Demand certificates of de-	
Due from banks.....	162,359 62	posit	7,547 14
Checks and other cash		Time certificates of de-	
items	773 11	posit	40,895 32
Cash on hand.....	40,442 51	Savings deposits	190,536 21
		Certified checks	330 00
Total.....	\$563,060 68	Total.....	\$563,060 68

ELLENSBURG—THE BANK OF ELLENSBURG.

E. H. SNOWDEN, *President.*

S. S. NESBIT, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$108,300 92	Capital paid in.....	\$50,000 00
Overdrafts	184 16	Surplus fund	2,500 00
Bonds and warrants.....	53,197 36	Undivided profits	11,176 39
Furniture and fixtures...	2,500 00	Postal savings deposits...	7,256 15
Other real estate owned..	11,847 59	Deposits subject to check.	120,473 99
Due from banks.....	55,746 91	Demand certificates of de-	
posits		posit	1,920 01
Checks and other cash		Cashier's checks	19 36
items	158 55	Time certificates of de-	
Exchanges for clearing		posit	25,503 35
house	659 54	Savings deposits	30,475 82
Cash on hand.....	5,681 10		
Expenses	11,048 94		
Total.....	\$249,325 07	Total.....	\$249,325 07

KITTITAS COUNTY—CONTINUED.

ELLENSBURG—THE FARMERS BANK.

JAS. RAMSEY, *President.*

J. C. STERLING, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$313,213 47	Capital paid in.....	\$50,000 00
Overdrafts	886 38	Surplus fund	35,000 00
Bonds and warrants.....	65,611 11	Undivided profits	24,817 33
Stocks and other securities	2,756 25	Due to banks.....	340 92
Banking house	40,000 00	Postal savings deposits...	22,603 40
Furniture and fixtures...	8,000 00	Deposits subject to check.	343,533 58
Due from banks.....	192,995 22	Demand certificates of de-	
Checks and other cash		posit	2,341 35
items	9,575 39	Cashier's checks	4,397 88
Cash on hand.....	32,035 00	Time certificates of de-	
Expenses	16,139 36	posit	105,988 56
		Savings deposits	92,189 16
Total.....	\$681,212 18	Total.....	\$681,212 18

KITTITAS—KITTITAS STATE BANK.

GEO. W. SNODGRASS, *President.*

H. W. HIGMAN, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$26,699 59	Capital paid in.....	\$10,000 00
Overdrafts	48 52	Surplus fund	650 00
Bonds and warrants.....	2,885 61	Undivided profits	2,045 44
Banking house	2,770 75	Due to banks.....	348 46
Furniture and fixtures...	2,328 32	Deposits subject to check..	21,029 41
Due from banks.....	3,707 18	Demand certificates of de-	
Exchanges for clearing		posit	2,199 97
house	1,766 37	Cashier's checks	435 00
Cash on hand.....	1,746 65	Savings deposits	5,244 71
Total.....	\$41,952 99	Total.....	\$41,952 99

Klickitat County.

BICKLETON—BANK OF BICKLETON.

C. E. FLOWER, *President.*

S. A. ROSSIER, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$119,568 31	Capital paid in.....	\$25,000 00
Overdrafts	139 33	Surplus fund	3,500 00
Bonds and warrants.....	1,851 31	Undivided profits	10,674 06
Stocks and other securi-		State deposits	5,000 00
ties	96 00	Deposits subject to check.	72,075 26
Banking house	1,600 00	Cashier's checks	908 18
Furniture and fixtures...	400 00	Time certificates of de-	
Due from banks.....	14,349 61	posit	20,426 51
Cash on hand.....	3,694 26	Bills payable	8,000 00
Expenses	3,885 19		
Total.....	\$145,584 01	Total.....	\$145,584 01

KLICKITAT COUNTY—CONTINUED.

*CENTERVILLE—FARMERS STATE BANK.

L. T. GILLET, *President.*J. C. KAIDERA, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$51,442 87	Capital paid in.....	\$15,000 00
Overdrafts	4,372 89	Undivided profits	2,369 27
Bonds and warrants.....	181 00	State deposits	3,500 00
Banking house	2,300 00	Deposits subject to check..	33,819 49
Furniture and fixtures....	1,774 88	Time certificates of deposit	25,075 46
Due from banks.....	13,084 04		
Cash on hand.....	3,968 09		
Expenses	2,641 07		
Total.....	\$79,764 22	Total.....	\$79,764 22

* Formerly private bank.

*GLENWOOD—GLENWOOD STATE BANK.

F. G. SPENCER, *President.*R. E. GEARHART, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$15,257 10	Capital paid in.....	\$10,000 00
Overdrafts	190 50	Undivided profits	1,117 88
Bonds and warrants.....	2,250 00	Deposits subject to check..	12,552 83
Banking house	1,000 00	Cashier's checks	112 80
Furniture and fixtures....	921 80	Time certificates of deposit	3,167 68
Due from banks.....	5,088 09	Escrow	99 43
Checks and other cash items	28 95		
Cash on hand.....	874 35		
Expenses	1,439 63		
Total.....	\$27,050 42	Total.....	\$27,050 42

* Formerly private bank.

*GOLDENDALE—BROOKS & COMPANY BANK.

N. B. BROOKS, *President.*A. E. COLEY, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$118,073 93	Capital paid in.....	\$25,000 00
Overdrafts	1,220 77	Surplus fund	2,500 00
Bonds and warrants.....	4,457 31	Undivided profits	6,624 29
Banking house	17,000 00	Deposits subject to check..	96,769 68
Furniture and fixtures....	2,257 61	Cashier's checks	2,211 77
Due from banks.....	16,792 47	Time certificates of de-	
Checks and other cash items	281 77	posit	27,837 47
Cash on hand.....	8,161 35	Certified checks	1 00
Expenses	7,699 00	Bills payable	15,000 00
Total.....	\$175,944 21	Total.....	\$175,944 21

* Formerly private bank.

KLICKITAT COUNTY—CONTINUED.

GOLDENDALE—STATE BANK OF GOLDENDALE.

L. T. GILLET, President.
C. E. CROOKS, Cashier.

RESOURCES.	
Loans and discounts.....	\$216,198 14
Overdrafts	2,930 75
Bonds and warrants.....	2,576 45
Stocks and other securities	380 00
Banking house	19,000 00
Furniture and fixtures...	1,901 20
Due from banks.....	19,702 27
Checks and other cash items	948 69
Cash on hand.....	8,101 75
Expenses	11,328 57
Total.....	\$283,067 82

LIABILITIES.	
Capital paid in.....	\$25,000 00
Surplus fund	8,000 00
Undivided profits	44,088 87
Due to banks.....	4,328 13
Deposits subject to check.	146,682 71
Cashier's checks	1,775 00
Time certificates of deposit	36,052 92
Savings deposits	7,140 19
Bills payable	10,000 00
Total.....	\$283,067 82

LYLE—STATE BANK OF LYLE.

C. F. HENDRICKSEN, President.
L. H. LAWSON, Cashier.

RESOURCES.	
Loans and discounts	\$39,431 34
Overdrafts	648 57
Bonds and warrants.....	1,025 24
Stocks and other securities	299 55
Banking house	5,000 00
Furniture and fixtures....	1,931 04
Due from banks.....	6,585 27
Checks and other cash items	34 35
Cash on hand.....	699 48
Expenses	3,567 66
Total.....	\$59,222 50

LIABILITIES.	
Capital paid in.....	\$12,500 00
Surplus fund	100 00
Undivided profits	2,976 95
Postal savings deposits....	372 11
Deposits subject to check..	26,362 56
Demand certificates of deposit	460 95
Cashier's checks	132 10
Time certificates of deposit	11,156 83
Bills payable	5,161 00
Total.....	\$59,222 50

WHITE SALMON—THE GILLET STATE BANK.

T. Z. GILLET, President.
G. A. READ, Cashier.

RESOURCES.	
Loans and discounts.....	\$74,489 57
Overdrafts	293 80
Bonds and warrants.....	2,566 67
Stocks and other securities	350 00
Banking house	5,500 00
Furniture and fixtures...	1,865 00
Due from banks.....	8,743 52
Exchanges for clearing house	1,325 77
Cash on hand.....	4,070 88
Expenses	1,274 62
Total.....	\$100,479 83

LIABILITIES.	
Capital paid in.....	\$25,000 00
Surplus fund	3,000 00
Undivided profits	2,456 94
Due to banks.....	2,000 00
Deposits subject to check.	42,011 28
Demand certificates of deposit	3,000 00
Cashier's checks	1,941 39
Time certificates of deposit	17,117 69
Savings deposits	3,952 53
Total.....	\$100,479 83

LEWIS COUNTY.

*CENTRALIA—CENTRALIA STATE BANK.

W. J. PATTERSON, *President.*M. W. DAUBNEY, *Assistant Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$173,003 22	Capital paid in.....	\$100,000 00
Bonds and warrants.....	7,634 99	Undivided profits	12,499 38
Furniture and fixtures...	4,085 00	State deposits	25,000 00
Due from banks.....	68,178 26	Deposits subject to check.	124,648 70
Exchanges for clearing house	457 54	Demand certificates of de- posit	2,558 27
Cash on hand.....	14,528 11	Time certificates of de- posit	3,669 38
Expenses	7,939 35	Savings deposits	5,500 74
		Certified checks	1,950 00
Total.....	\$275,826 47	Total.....	\$275,826 47

* Authorized January, 1915.

CENTRALIA—FARMERS & MERCHANTS BANK.

B. H. RHODES, *President.*C. PAUL UHLMANN, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$240,448 97	Capital paid in.....	\$75,000 00
Bonds and warrants.....	50,473 29	Surplus fund	5,000 00
Stocks and other securi- ties	100 00	Undivided profits	18,547 49
Banking house	37,400 00	Postal savings deposits...	21,535 60
Furniture and fixtures...	4,500 00	State deposits	25,000 00
Due from banks.....	97,373 31	Deposits subject to check.	189,700 95
Exchanges for clearing house	4,106 46	Demand certificates of de- posit	17,791 96
Cash on hand.....	36,042 10	Time certificates of de- posit	16,188 07
Expenses	13,894 08	Savings deposits	115,574 14
Total.....	\$484,338 21	Total.....	\$484,338 21

CENTRALIA—FIELD AND LEASE, BANKERS.

JOHN A. FIELD, *President.*J. E. LEASE, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$55,977 82	Capital paid in.....	\$25,000 00
Overdrafts	157 84	Surplus fund	20,000 00
Bonds and warrants.....	26,454 82	Undivided profits	10,879 92
Banking house	45,000 00	Deposits subject to check.	143,731 00
Furniture and fixtures...	2,365 00	Demand certificates of de- posit	9,532 52
Due from banks.....	91,860 42	Time certificates of de- posit	6,829 00
Exchanges for clearing house	1,004 69	Savings deposits	36,314 97
Cash on hand.....	20,948 76		
Expenses	8,518 06		
Total.....	\$252,287 41	Total.....	\$252,287 41

LEWIS COUNTY—CONTINUED.

CHEHALIS—COFFMAN, DOBSON & CO., BANKERS.

N. B. COFFMAN, *President.*

J. A. URQUHART, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts....	\$709,128 22	Capital paid in.....	\$50,000 00
Overdrafts	628 99	Surplus fund	100,000 00
Bonds and warrants....	82,270 29	Undivided profits	22,459 78
Banking house	29,445 00	Due to banks.....	13,924 47
Other real estate owned..	17,600 00	Postal savings deposits..	7,693 26
Due from banks.....	162,770 11	State deposits	33,000 00
Checks and other cash		Deposits subject to check	355,408 80
items	1,561 25	Demand certificates of	
Cash on hand.....	62,753 56	deposit	12,814 09
Expenses	12,094 48	Cashier's checks	130 04
		Time certificates of de-	
		posit	123,787 43
		Savings deposits	358,795 25
		Certified checks	238 78
Total.....	\$1,078,251 90	Total.....	\$1,078,251 90

CHEHALIS—SECURITY STATE BANK.

J. W. ALEXANDER, *President.*

W. S. SHORT, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts....	\$172,477 76	Capital paid in.....	\$25,000 00
Overdrafts	1 28	Surplus fund	20,000 00
Bonds and warrants....	24,369 47	Undivided profits	6,709 39
Stocks and other securi-		Postal savings deposits...	2,937 91
ties	1,383 90	State deposits	15,000 00
Banking house	6,500 00	Deposits subject to check.	93,701 32
Furniture and fixtures...	2,250 00	Demand certificates of de-	
Other real estate owned..	9,500 00	posit	3,623 97
Due from banks.....	7,671 41	Cashier's checks	193 50
Checks and other cash		Time certificates of de-	
items	572 95	posit	27,832 93
Cash on hand.....	12,874 50	Savings deposits	34,726 19
Expenses	3,623 94	Re-discounts	11,500 00
Total.....	\$241,225 21	Total.....	\$241,225 21

MORTON—STATE BANK OF MORTON.

F. M. BROADBENT, *President.*

W. W. MORSE, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts....	\$21,739 03	Capital paid in.....	\$11,000 00
Overdrafts	905 01	Surplus fund	500 00
Bonds and warrants....	9,375 81	Undivided profits	2,627 90
Banking house	2,685 00	Deposits subject to check..	32,386 73
Furniture and fixtures....	2,100 00	Demand certificates of de-	
Due from banks.....	8,108 68	posit	176 85
Checks and other cash		Time certificates of deposit	50 00
items	1,800 81	Savings deposits	2,889 91
Cash on hand.....	1,783 64	Bills payable	2,700 00
Expenses	4,096 69	Other	263 28
Total.....	\$52,594 67	Total.....	\$52,594 67

LEWIS COUNTY—CONTINUED.

NAPAVINE—NAPAVINE STATE BANK.

JAMES P. WETER, *President.*

L. A. DAILY, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$19,818 92	Capital paid in.....	\$10,000 00
Bonds and warrants.....	2,103 40	Undivided profits	2,024 52
Banking house	2,827 66	Due to banks.....	29 04
Furniture and fixtures....	1,633 25	Deposits subject to check..	13,611 42
Due from banks.....	954 56	Demand certificates of de-	
Checks and other cash		posit	2,063 45
items	20 50	Time certificates of deposit	2,280 00
Cash on hand.....	3,560 07	Savings deposits	2,680 62
Expenses	1,770 69		
Total.....	\$32,689 05	Total.....	\$32,689 05

*PE ELL—PE ELL STATE BANK.

E. H. LESTER, *President.*

C. W. BOYNTON, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$16,335 92	Capital paid in.....	\$10,000 00
Overdrafts	644 75	Undivided profits	1,063 16
Bonds and warrants.....	213 68	Due to banks.....	149 90
Banking house	1,500 00	Deposits subject to check..	14,209 07
Furniture and fixtures....	700 00	Demand certificates of de-	
Due from banks	2,710 32	posit	726 20
Cash on hand.....	5,051 05	Time certificates of deposit	3 59
Expenses	735 91	Savings deposits	1,739 71
Total.....	\$27,891 63	Total.....	\$27,891 63

* Formerly private bank.

TOLEDO—TOLEDO STATE BANK.

R. W. BELL, *President-Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$40,355 26	Capital paid in.....	\$10,000 00
Overdrafts	12 41	Surplus fund	1,700 00
Bonds and warrants.....	14,240 17	Undivided profits	4,036 01
Banking house	2,000 00	Deposits subject to check..	40,205 99
Furniture and fixtures....	1,753 80	Demand certificates of de-	
Other real estate owned...	1,000 00	posit	2,656 45
Due from banks.....	8,106 01	Cashier's checks	18 56
Cash on hand.....	3,793 78	Time certificates of deposit	14,474 88
Expenses	4,238 74	Savings deposits	2,156 28
		Certified checks	252 00
Total.....	\$75,500 17	Total.....	\$75,500 17

LEWIS COUNTY—CONTINUED.

VADER—LITTLE FALLS STATE BANK.

G. O. WADE, *President.*W. C. KROG, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$38,317 41
Overdrafts	69 26
Bonds and warrants.....	10,329 52
Banking house	1,336 39
Furniture and fixtures....	2,008 33
Due from banks.....	12,039 74
Checks and other cash items	58 75
Cash on hand.....	3,462 46
Expenses	2,701 82
Total.....	\$70,323 68

LIABILITIES.	
Capital paid in.....	\$10,000 00
Surplus fund	800 00
Undivided profits	4,057 10
Deposits subject to check..	41,840 01
Demand certificates of de- posit	1,375 15
Cashier's checks	125 85
Time certificates of deposit	11,875 57
Certified checks	250 00
Total.....	\$70,323 68

WINLOCK—STATE BANK OF WINLOCK.

A. N. CHENEY, *President.*CLEMENT A. COOK, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$60,019 02
Overdrafts	73 26
Bonds and warrants.....	11,929 61
Stocks and other securities	1,467 62
Banking house	9,425 00
Furniture and fixtures....	2,692 60
Other real estate owned...	706 97
Due from banks.....	3,219 34
Checks and other cash items	613 96
Cash on hand.....	4,892 73
Expenses	4,837 20
Total.....	\$99,877 31

LIABILITIES.	
Capital paid in.....	\$15,000 00
Surplus fund	800 00
Undivided profits	5,074 18
Due to banks.....	1 86
Deposits subject to check..	43,938 63
Demand certificates of de- posit	4,037 45
Time certificates of deposit	13,650 24
Savings deposits	1,174 95
Certified checks	200 00
Re-discounts	7,000 00
Bills payable	9,000 00
Total.....	\$99,877 31

LINCOLN COUNTY.

ALMIRA—ALMIRA STATE BANK.

JENS PETERSON, *President.*JULIUS C. JOHNSON, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$258,346 13
Overdrafts	1,136 90
Bonds and warrants.....	1,987 26
Banking house	12,500 00
Furniture and fixtures...	3,500 00
Other real estate owned..	3,750 00
Due from banks.....	32,548 13
Cash on hand.....	10,200 98
Expenses	11,471 47
Total.....	\$335,440 87

LIABILITIES.	
Capital paid in.....	\$25,000 00
Surplus fund	25,000 00
Undivided profits	17,317 01
Due to banks.....	1,359 26
Postal savings deposits...	258 98
Indian deposits	13,783 61
Deposits subject to check.	127,015 16
Demand certificates of de- posit	11,514 31
Cashier's checks	1,468 65
Time certificates of de- posit	100,875 18
Savings deposits	1,848 71
Bills payable	10,000 00
Total.....	\$335,440 87

LINCOLN COUNTY—CONTINUED.

ALMIRA—THE FARMERS STATE BANK.

FRED H. HYDE, *President.*J. H. SEXSON, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$82,044 65
Overdrafts	3,901 11
Banking house	6,500 00
Furniture and fixtures...	1,905 55
Other real estate owned..	1,400 00
Due from banks.....	8,438 73
Cash on hand.....	1,842 06
Expenses	4,767 49

Total..... \$110,799 59

LIABILITIES.	
Capital paid in.....	\$15,000 00
Surplus fund	1,500 00
Undivided profits	1,852 41
Deposits subject to check.	44,897 23
Demand certificates of de-	
posit	195 15
Cashier's checks	1 50
Time certificates of de-	
posit	18,475 00
Savings deposits	878 30
Bills payable	28,000 00

Total..... \$110,799 59

CRESTON—CRESTON STATE BANK.

J. M. DUNGAN, *President.*GEO. L. DUNCAN, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$130,383 02
Overdrafts	664 88
Bonds and warrants.....	884 50
Banking house	8,656 80
Furniture and fixtures...	2,378 60
Due from banks.....	10,047 13
Checks and other cash	
items	1,813 55
Cash on hand.....	5,620 90
Expenses	4,995 12

Total..... \$165,444 50

LIABILITIES.	
Capital paid in.....	\$25,000 00
Surplus fund	5,000 00
Undivided profits	8,983 51
Deposits subject to check.	94,350 22
Demand certificates of de-	
posit	9,598 83
Cashier's checks	214 39
Indian deposits	17,849 25
Savings deposits	4,448 30

Total..... \$165,444 50

DAVENPORT—LINCOLN COUNTY STATE BANK.

J. W. FBY, *President.*FRED S. WELLS, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$286,908 96
Overdrafts	2,426 18
Bonds and warrants.....	20,026 98
Furniture and fixtures...	3,545 30
Other real estate owned..	4,354 72
Due from banks.....	27,203 41
Checks and other cash	
items	488 85
Cash on hand.....	12,117 68
Expenses	8,763 88

Total..... \$365,835 96

LIABILITIES.	
Capital paid in.....	\$50,000 00
Surplus fund	6,500 00
Undivided profits	8,972 69
Due to banks.....	12,009 44
Postal savings deposits...	173 38
State deposits	10,000 00
Deposits subject to check.	120,524 13
Demand certificates of de-	
posit	1,769 55
Cashier's checks	604 61
Time certificates of de-	
posit	45,497 25
Savings deposits	59,709 91
Certified checks	75 00
Bills payable	50,000 00

Total..... \$365,835 96

LINCOLN COUNTY—CONTINUED.

EDWALL—BANK OF EDWALL.

JOHN F. GREEN, *President.*

WARD JESSEPH, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$130,657 35
Overdrafts	292 73
Bonds and warrants.....	59 81
Banking house	4,200 00
Furniture and fixtures...	1,250 00
Other real estate owned..	14,414 60
Due from banks.....	13,152 78
Checks and other cash items	60 00
Cash on hand.....	6,365 10
Expenses	3,532 25
Total.....	\$173,984 62

LIABILITIES.	
Capital paid in.....	\$25,000 00
Surplus fund	2,600 00
Undivided profits	5,322 86
Due to banks.....	464 19
Deposits subject to check.	74,480 06
Demand certificates of deposit	33,719 56
Cashier's checks	4,897 95
Bills payable	27,500 00
Total.....	\$173,984 62

*GOVAN—STATE BANK OF GOVAN.

H. JENKINS, *President.*

RESOURCES.	
Loans and discounts.....	\$1,070 08
Overdrafts	68
Stocks and other securities	5,715 83
Furniture and fixtures....	905 00
Other real estate owned...	946 75
Due from banks.....	16 35
Expenses	3,079 75
Total.....	\$11,734 44

LIABILITIES.	
Capital paid in.....	\$10,000 00
Surplus fund	225 00
Undivided profits	1,309 91
Dividends unpaid	20 00
Deposits subject to check..	36 38
Bills payable	143 15
Total.....	\$11,734 44

* Liquidating.

HARRINGTON—THE HARRINGTON STATE BANK.

JOHN E. RUSSELL, *President.*

H. O. JONES, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$131,538 40
Banking house	18,800 00
Furniture and fixtures...	3,050 00
Due from banks.....	22,186 96
Checks and other cash items	242 40
Exchanges for clearing house	414 49
Cash on hand.....	8,830 05
Expenses	826 79
Total.....	\$185,889 09

LIABILITIES.	
Capital paid in.....	\$30,000 00
Surplus fund	2,700 00
Undivided profits	4,096 42
Due to banks.....	676 43
Deposits subject to check.	99,031 96
Demand certificates of deposit	6,385 00
Cashier's checks	487 50
Time certificates of deposit	39,971 76
Savings deposits	2,480 02
Certified checks	60 00
Total.....	\$185,889 09

LINCOLN COUNTY—CONTINUED.

ODESSA—UNION STATE BANK.

G. W. FINNEY, *President.*C. T. DEETS, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$373,122 87	Capital paid in.....	\$40,000 00
Overdrafts	1,711 58	Surplus fund	12,000 00
Bonds and warrants.....	1,056 00	Undivided profits	17,087 30
Banking house	13,500 00	Deposits subject to check.	179,122 96
Furniture and fixtures....	3,000 00	Demand certificates of de-	
Other real estate owned..	20,000 00	posit	7,413 78
Due from banks.....	44,935 48	Indian deposits	12,202 46
Checks and other cash		Time certificates of de-	
items	201 56	posit	147,434 13
Cash on hand.....	9,220 83	Savings deposits	21,487 69
		Bills payable	30,000 00
Total.....	\$466,748 32	Total.....	\$466,748 32

REARDAN—FARMERS STATE BANK.

JOHN MAHRT, *President.*E. E. NOBLE, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$150,924 09	Capital paid in.....	\$25,000 00
Overdrafts	1,649 98	Surplus fund	3,000 00
Bonds and warrants.....	75 00	Undivided profits	8,421 00
Banking house	3,292 53	Deposits subject to check.	70,185 58
Furniture and fixtures...	2,300 00	Cashier's checks	324 44
Other real estate owned..	5,000 00	Time certificates of de-	
Due from banks.....	17,105 26	posit	88,853 62
Checks and other cash		Savings deposits	2,766 12
items	489 33		
Exchanges for clearing			
house	113 33		
Cash on hand.....	9,709 25		
Expenses	7,891 99		
Total.....	\$198,550 76	Total.....	\$198,550 76

SPRAGUE—BANK OF SPRAGUE.

A. L. SMALLEY, *President.*RALPH R. JONES, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$347,207 22	Capital paid in.....	\$30,000 00
Overdrafts	5,663 82	Surplus fund	10,000 00
Bonds and warrants.....	284 74	Undivided profits	9,188 71
Banking house	10,000 00	Deposits subject to check.	176,130 85
Furniture and fixtures...	3,637 00	Demand certificates of de-	
Other real estate owned..	5,961 89	posit	180,268 56
Due from banks.....	37,637 50	Cashier's checks	677 47
Checks and other cash		Bills payable	20,000 00
items	46 63		
Cash on hand.....	14,811 97		
Expenses	1,014 82		
Total.....	\$426,265 59	Total.....	\$426,265 59

LINCOLN COUNTY—CONTINUED.

*SPRAGUE—FARMERS STATE BANK.

H. D. MILLS, *President.*AUGUST WITT, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$32,772 55	Capital paid in.....	\$25,000 00
Furniture and fixtures....	2,516 51	Undivided profits	233 02
Due from banks.....	655 51	Deposits subject to check..	7,763 25
Checks and other cash		Demand certificates of de-	
items	78 30	posit	8,387 65
Cash on hand.....	4,754 83	Cashier's checks	14 00
Expenses	1,075 22	Savings deposits	455 00
Total.....	\$41,852 92	Total.....	\$41,852 92

* Authorized August, 1915.

WILBUR—STATE BANK OF WILBUR.

J. MCPHERSON, *President.*CHAS. HUDKINS, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$249,023 50	Capital paid in.....	\$25,000 00
Overdrafts	434 84	Surplus fund	5,000 00
Bonds and warrants.....	58,395 80	Undivided profits	15,546 85
Banking house	10,000 00	Deposits subject to check.	292,746 90
Due from banks.....	84,279 87	Time certificates of de-	
Checks and other cash		posit	89,121 58
items	346 41	Savings deposits	6,238 07
Cash on hand.....	23,693 43		
Expenses	7,479 55		
Total.....	\$433,653 40	Total.....	\$433,653 40

MASON COUNTY.

SHELTON—STATE BANK OF SHELTON.

M. E. REED, *President.*C. I. PRITCHARD, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$147,568 36	Capital paid in.....	\$25,000 00
Bonds and warrants.....	104,808 25	Surplus fund	15,000 00
Banking house	5,000 00	Undivided profits	19,143 22
Furniture and fixtures...	695 53	Postal savings deposits...	1,537 07
Other real estate owned..	2,500 00	Deposits subject to check.	180,684 45
Due from banks.....	102,707 97	Demand certificates of de-	
Checks and other cash		posit	7,428 76
items	642 26	Time certificates of de-	
Cash on hand.....	19,834 16	posit	4,411 58
Expenses	9,544 23	Savings deposits	140,095 68
Total.....	\$393,300 76	Total.....	\$393,300 76

OKANOOGAN COUNTY.

CONCONULLY—COMMERCIAL BANK.

N. E. WHITWORTH, *President.*F. J. MAY, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$173,287 08	Capital paid in.....	\$40,000 00
Bonds and warrants.....	4,579 11	Surplus fund	8,000 00
Stocks and other securi- ties	8,240 62	Undivided profits	16,271 14
Banking house	2,282 50	Dividends unpaid	195 00
Furniture and fixtures...	4,766 48	Due to banks.....	5,144 44
Other real estate owned..	6,672 26	Deposits subject to check.	104,031 76
Due from banks.....	20,502 09	Demand certificates of de- posit	1,130 50
Checks and other cash items	390 55	Cashier's checks	1,997 85
Cash on hand.....	12,853 75	Time certificates of de- posit	47,934 03
Expenses	13,130 28	Bills payable	22,000 00
Total.....	\$246,704 72	Total.....	\$246,704 72

MOLSON—MOLSON STATE BANK.

C. S. BARNES, *President.*G. B. AVERY, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$82,328 62	Capital paid in.....	\$15,000 00
Overdrafts	114 44	Surplus fund	4,000 00
Bonds and warrants.....	421 60	Undivided profits	3,199 88
Furniture and fixtures...	2,200 00	Deposits subject to check.	54,174 44
Other real estate owned..	200 00	Cashier's checks	3,158 78
Due from banks.....	16,407 19	Time certificates of de- posit	31,774 38
Checks and other cash items	636 73		
Cash on hand.....	6,207 31		
Expenses	2,791 59		
Total.....	\$111,307 48	Total.....	\$111,307 48

OMAK—OMAK STATE BANK.

J. I. POGUE, *President.*JOHN SCOTT, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$41,303 37	Capital paid in.....	\$15,000 00
Overdrafts	150 34	Surplus fund	1,650 00
Bonds and warrants.....	7,580 66	Undivided profits	3,519 87
Banking house	2,681 25	Deposits subject to check..	48,433 84
Furniture and fixtures...	2,832 45	Demand certificates of de- posit	1,072 57
Other real estate owned...	451 57	Time certificates of deposit	9,833 04
Due from banks.....	17,720 23	Certified checks	70
Checks and other cash items	303 95		
Cash on hand.....	3,705 76		
Expenses	2,780 44		
Total.....	\$79,510 02	Total.....	\$79,510 02

OKANOGAN COUNTY—CONTINUED.

PATEROS—METHOW VALLEY BANK.

CHAS. T. BORG, *President.*O. A. JOHNSON, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$14,681 33
Overdrafts	10 39
Furniture and fixtures....	1,254 00
Other real estate owned...	2,297 35
Due from banks.....	16,611 98
Checks and other cash items	22 85
Cash on hand.....	2,437 56
Expenses	2,546 83
Total.....	\$39,862 29

LIABILITIES.	
Capital paid in.....	\$10,000 00
Undivided profits	2,763 65
Deposits subject to check..	23,916 89
Demand certificates of deposit	64 36
Time certificates of deposit	1,126 44
Certified checks	1,990 95
Total.....	\$39,862 29

RIVERSIDE—OKANOGAN STATE BANK.

HANS LUND, *President.*ARTHUR LUND, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$101,931 89
Overdrafts	3,270 00
Bonds and warrants.....	618 66
Banking house	3,000 00
Furniture and fixtures...	3,000 00
Due from banks.....	23,148 06
Checks and other cash items	3,527 38
Cash on hand.....	5,868 87
Expenses	4,934 95
Total.....	\$149,299 81

LIABILITIES.	
Capital paid in.....	\$25,000 00
Surplus fund	12,500 00
Undivided profits	7,640 46
Deposits subject to check.	75,892 12
Demand certificates of deposit	474 35
Time certificates of deposit	27,790 48
Certified checks	2 40
Total.....	\$149,299 81

TWISP—COMMERCIAL BANK.

WM. G. HUGHES, *President.*GEO. W. SPROUSE, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$116,864 70
Overdrafts	32 36
Bonds and warrants.....	3,678 74
Stocks and other securities	112 59
Banking house	2,451 00
Furniture and fixtures...	2,624 31
Other real estate owned..	2,537 41
Due from banks.....	27,621 14
Checks and other cash items	140 12
Cash on hand.....	8,255 59
Total.....	\$164,317 96

LIABILITIES.	
Capital paid in.....	\$35,000 00
Surplus fund	4,600 00
Undivided profits	7,742 42
Deposits subject to check.	86,300 17
Cashier's checks	1,979 07
Time certificates of deposit	28,696 30
Total.....	\$164,317 96

PACIFIC COUNTY.

ILWACO—SOUTHWESTERN WASHINGTON BANK.

H. FREEBOROUGH, *President.*P. L. SINCLAIR, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$64,506 46
Overdrafts	404 78
Bonds and warrants.....	14,574 97
Banking house	1,145 16
Furniture and fixtures...	3,221 40
Other real estate owned..	1,200 00
Due from banks.....	10,178 57
Checks and other cash items	811 75
Cash on hand.....	4,760 22
Expenses	4,345 50
Total.....	\$105,148 81

LIABILITIES.	
Capital paid in.....	\$10,000 00
Surplus fund	300 00
Undivided profits	4,754 46
Postal savings deposits...	2,195 80
Deposits subject to check.	62,745 25
Demand certificates of deposit	6,916 39
Time certificates of deposit	8,391 85
Savings deposits	4,830 84
Certified checks	14 22
Bills payable	5,000 00
Total.....	\$105,148 81

RAYMOND—WILLAPA HARBOR STATE BANK.

H. W. MACPHAIL, *President.*E. E. COLKETT, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$333,393 07
Overdrafts	21 18
Bonds and warrants.....	11,446 57
Furniture and fixtures...	5,000 00
Other real estate owned..	14,201 93
Due from banks.....	50,330 36
Checks and other cash items	390 26
Cash on hand.....	19,191 02
Expenses	18,284 91
Total.....	\$452,259 30

LIABILITIES.	
Capital paid in.....	\$50,000 00
Surplus fund	30,000 00
Undivided profits	24,862 92
State deposits	10,000 00
Deposits subject to check.	203,879 93
Demand certificates of deposit	10 00
Cashier's checks	1,753 36
Time certificates of deposit	31,198 01
Savings deposits	30,503 03
Certified checks	176 15
Re-discounts	58,875 90
Bills payable	11,000 00
Total.....	\$452,259 30

*SOUTH BEND—FIRST INTERNATIONAL BANK.

*Liquidating through ROY A. LANGLEY, *Special Deputy State Bank Examiner.*

RESOURCES.	
Loans and discounts.....	\$164,689 51
Overdrafts	7 72
Bonds and warrants, and stocks and other securities	11,724 95
Banking house, and furniture and fixtures....	16,000 00
Other real estate owned..	22,852 43
Due from banks.....	18,724 51
Checks and other cash items	103 90
Cash on hand.....	1,737 81
Expense	20,412 61
Total.....	\$255,753 44

LIABILITIES.	
Capital paid in.....	\$50,000 00
Surplus fund	7,838 46
Undivided profits	8,732 26
Due to banks.....	3,300 60
Miscellaneous collections..	148 00
Deposits	38,465 01
Interest collected by examiner	677 32
Cashier's checks	5 90
Certified checks	40 00
Re-discounts	6,000 00
Bills payable	12,687 38
Examiner's certificates issued	127,858 51
Total.....	\$255,753 44

PACIFIC COUNTY—CONTINUED.

SOUTH BEND—PACIFIC STATE BANK.

Jos. G. HEIM, *President.*

L. W. HOMAN, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$481,863 86	Capital paid in.....	\$100,000 00
Overdrafts	1,161 95	Surplus fund	35,000 00
Bonds and warrants.....	42,623 27	Undivided profits	32,217 91
Stocks and other securi- ties	210 00	Due to banks.....	1,879 85
Banking house	10,000 00	Postal savings deposits...	8,984 37
Furniture and fixtures...	3,150 00	Deposits subject to check.	234,193 39
Other real estate owned..	29,690 14	Demand certificates of de- posit	1,314 81
Due from banks.....	78,496 54	Cashier's checks	1,913 02
Checks and other cash items	23,992 39	Time certificates of de- posit	82,877 50
Cash on hand.....	26,817 39	Savings deposits	112,226 83
Expenses	24,203 80	Re-discounts	11,601 66
		Bills payable	50,000 00
Total.....	\$672,209 34	Total.....	\$672,209 34

PEND OREILLE COUNTY.

IONE—IONE STATE BANK.

FRED TRUMBULL, *President.*

E. THOMPSON, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$50,892 89	Capital paid in.....	\$10,000 00
Bonds and warrants.....	7,331 96	Surplus fund	1,220 00
Banking house	3,450 00	Undivided profits	1,419 85
Furniture and fixtures....	2,680 00	Due to banks.....	6,013 67
Due from banks.....	7,098 15	Postal savings deposits...	701 32
Checks and other cash items	215 70	Deposits subject to check..	28,961 66
Cash on hand.....	6,161 45	Demand certificates of de- posit	1,330 81
Expenses	1,604 18	Cashier's checks	142 50
		Time certificates of deposit	21,170 10
		Savings deposits	8,474 42
Total.....	\$79,434 33	Total.....	\$79,434 33

METALINE FALLS—METALINE FALLS STATE & SAVINGS BANK.

H. E. NEELANDS, *President.*

A. W. DRESSEL, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$34,186 04	Capital paid in.....	\$10,000 00
Overdrafts	71 07	Surplus fund	400 00
Bonds and warrants.....	892 83	Undivided profits	1,955 68
Furniture and fixtures....	2,000 00	Deposits subject to check..	34,786 90
Due from banks.....	13,685 69	Demand certificates of de- posit	1,030 20
Checks and other cash items	153 85	Time certificates of deposit	3,394 68
Cash on hand.....	7,748 41	Savings deposits	9,767 90
Expenses	2,597 47		
Total.....	\$61,335 36	Total.....	\$61,335 36

PEND OREILLE COUNTY—CONTINUED.

NEWPORT—SECURITY STATE BANK.

J. T. PHILLIPS, President.

E. W. ANDERSON, Cashier.

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$181,116 31	Capital paid in.....	\$25,000 00
Overdrafts	391 75	Surplus fund	6,000 00
Bonds and warrants.....	17,281 01	Undivided profits	6,000 57
Banking house	11,982 09	Due to banks.....	1,035 29
Furniture and fixtures...	3,400 00	Deposits subject to check.	112,142 30
Other real estate owned..	2,270 00	Demand certificates of de-	
Due from banks.....	28,326 47	posit	3,286 74
Checks and other cash		Time certificates of de-	
items	397 47	posit	39,226 49
Cash on hand.....	13,320 46	Savings deposits	49,469 99
Expenses	3,100 11	Certified checks	19,424 29
Total.....	\$261,585 67	Total.....	\$261,585 67

PIERCE COUNTY.

BUCKLEY—STATE BANK OF BUCKLEY.

A. ECKERN, President.

C. O. STEBERG, Cashier.

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$125,552 78	Capital paid in.....	\$25,000 00
Overdrafts	264 71	Surplus fund	5,000 00
Bonds and warrants.....	28,728 01	Undivided profits	2,845 61
Banking house	4,610 60	Due to banks.....	94 64
Furniture and fixtures...	2,000 00	Postal savings deposits...	7,512 12
Other real estate owned..	3,066 04	Deposits subject to check.	72,160 49
Due from banks.....	23,490 29	Demand certificates of de-	
Checks and other cash		posit	2,160 41
items	841 29	Time certificates of de-	
Cash on hand.....	11,497 47	posit	33,206 05
Expenses	4,540 82	Savings deposits	46,612 69
Total.....	\$204,592 01	Bills payable	10,000 00
		Total.....	\$204,592 01

EATONVILLE—EATONVILLE STATE BANK.

F. M. ROBERTS, President.

NORMAN J. BRUEN, Cashier.

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$24,249 54	Capital paid in.....	\$10,000 00
Overdrafts	22 21	Undivided profits	2,151 04
Bonds and warrants.....	17,582 13	Postal savings deposits....	900 00
Banking house	5,752 06	Deposits subject to check..	39,766 93
Furniture and fixtures....	2,162 40	Demand certificates of de-	
Due from banks.....	6,077 75	posit	549 94
Checks and other cash		Time certificates of deposit	1,660 00
items	82 31	Savings deposits	7,515 41
Cash on hand.....	4,788 37	Certified checks	117 50
Expenses	1,944 05		
Total.....	\$62,660 82	Total.....	\$62,660 82

PIERCE COUNTY—CONTINUED.

ORTING—ORTING STATE BANK.

W. J. THOMPSON, *President.*M. E. CALLENDAR, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$37,032 47	Capital paid in.....	\$10,000 00
Bonds and warrants.....	28,637 93	Surplus fund	100 00
Furniture and fixtures...	2,600 00	Undivided profits	4,569 69
Due from banks.....	27,936 72	Postal savings deposits...	1,180 15
Cash on hand.....	3,584 70	Deposits subject to check.	44,810 43
Expenses	3,484 46	Demand certificates of de-	
		posit	7,977 83
		Time certificates of de-	
		posit	34,638 18
Total.....	\$103,276 28	Total.....	\$103,276 28

PUYALLUP—CITIZENS STATE BANK.

G. W. EDGERTON, *President.*W. A. MILLER, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$272,577 87	Capital paid in.....	\$25,000 00
Overdrafts	24 03	Surplus fund	10,000 00
Bonds and warrants.....	11,681 00	Undivided profits	17,367 73
Banking house	9,100 00	Postal savings deposits...	2,900 45
Furniture and fixtures...	4,429 00	Deposits subject to check.	168,451 49
Other real estate owned..	3,892 00	Demand certificates of de-	
Due from banks.....	51,150 00	posit	3,373 39
Checks and other cash		Time certificates of de-	
items	276 52	posit	47,244 15
Cash on hand.....	12,858 69	Savings deposits	84,670 23
Expenses	3,109 22	Certified checks	315 89
		Re-discounts	9,775 00
Total.....	\$369,098 33	Total.....	\$369,098 33

PUYALLUP—PUYALLUP STATE BANK.

J. S. ALSPAUGH, *President.*J. M. JONES, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$167,176 69	Capital paid in.....	\$25,000 00
Overdrafts	133 14	Surplus fund	4,250 00
Bonds and warrants.....	46,268 91	Undivided profits	6,549 24
Stocks and other securi-		Due to banks.....	6,347 22
ties	4,560 00	Postal savings deposits...	9,932 55
Banking house	4,400 00	Deposits subject to check.	148,653 21
Furniture and fixtures...	2,350 00	Demand certificates of de-	
Other real estate owned..	4,500 00	posit	3,998 52
Due from banks.....	56,860 41	Time certificates of de-	
Checks and other cash		posit	26,007 38
items	498 22	Savings deposits	66,930 88
Cash on hand.....	10,277 23	Certified checks	1,200 00
Expenses	1,844 40		
Total.....	\$298,869 00	Total.....	\$298,869 00

PIERCE COUNTY—CONTINUED.

ROY—ROY STATE BANK.

WM. T. PERKINS, *President.*H. G. HOTCHKISS, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$51,608 26	Capital paid in.....	\$10,000 00
Bonds and warrants.....	19,239 97	Surplus fund	3,500 00
Banking house	2,100 00	Undivided profits	4,500 99
Furniture and fixtures....	2,145 15	State deposits	10,000 00
Other real estate owned...	1,000 00	Deposits subject to check..	34,789 62
Due from banks.....	8,866 20	Demand certificates of de-	
Checks and other cash items	24 37	posit	795 78
Cash on hand.....	2,988 48	Time certificates of deposit	6,620 00
Expenses	3,286 04	Savings deposits	21,052 08
Total.....	\$91,258 47	Total.....	\$91,258 47

SUMNER—STATE BANK OF SUMNER.

R. R. WHITE, *President.*J. P. BARRON, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$155,360 38	Capital paid in.....	\$25,000 00
Overdrafts	1,372 00	Surplus fund	3,000 00
Bonds and warrants.....	3,522 90	Undivided profits	729 87
Stocks and other securi-		Deposits subject to check.	102,613 04
ties	650 00	Demand certificates of de-	
Banking house	8,100 00	posit	1,679 35
Furniture and fixtures....	2,890 00	Cashier's checks	2,208 51
Due from banks.....	9,838 77	Time certificates of de-	
Checks and other cash		posit	14,052 05
items	1,018 47	Savings deposits	13,586 16
Cash on hand.....	6,778 84	Re-discounts	5,000 00
Expenses	2,837 62	Bills payable	24,000 00
Total.....	\$191,868 98	Total.....	\$191,868 98

TACOMA—BANKERS TRUST COMPANY.

W. R. PHILLIPS, *President.*A. V. HAYDEN, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$352,282 24	Capital paid in.....	\$300,000 00
Overdrafts	166 05	Surplus fund	10,000 00
Bonds and warrants.....	77,459 16	Undivided profits	15,347 22
Stocks and other securi-		Due to banks.....	11,094 25
ties	1,800 00	State deposits	80,000 00
Banking house	325,000 00	Deposits subject to check.	321,554 62
Furniture and fixtures....	12,500 00	Demand certificates of de-	
Other real estate owned...	36,822 60	posit	11,196 18
Due from banks.....	87,692 78	Cashier's checks	7,637 38
Checks and other cash		Time certificates of de-	
items	4,611 08	posit	36,410 60
Exchanges for clearing		Savings deposits	136,509 72
house	17,086 38	Certified checks	8,999 39
Cash on hand.....	15,799 92		
Improvement account ...	7,529 15		
Total.....	\$938,749 36	Total.....	\$938,749 36

PIERCE COUNTY—CONTINUED.

TACOMA—FIDELITY TRUST COMPANY.

JNO. S. BAKER, *President.*F. H. LUCE, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$2,792,044 01	Capital paid in.....	\$500,000 00
Overdrafts	952 31	Surplus fund	100,000 00
Bonds and warrants....	574,156 51	Undivided profits	418,356 97
Stocks and other securi- ties	71,947 41	Dividends unpaid	12 00
Banking house	600,000 00	Due to banks.....	299,908 76
Due from banks.....	548,649 89	Postal savings deposits..	21,446 70
Checks and other cash items	1,318 22	State deposits	335,000 00
Exchanges for clearing house	27,033 28	Deposits subject to check	1,122,648 87
Cash on hand.....	288,006 63	Demand certificates of deposit	10,071 90
Other	2,130 00	Cashier's checks	6,944 97
		Time certificates of de- posit	86,598 95
		Savings deposits	2,048,002 96
		Certified checks	4,916 18
		Letters of credit.....	2,330 00
Total.....	\$4,906,238 26	Total.....	\$4,906,238 26

TACOMA—NORTH PACIFIC BANK.

E. S. PRENTICE, *President.*P. WALLERICH, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$92,465 47	Capital paid in.....	\$25,000 00
Bonds and warrants.....	57,680 43	Surplus fund	10,000 00
Banking house	18,000 00	Undivided profits	11,746 17
Furniture and fixtures...	8,000 00	Postal savings deposits...	10,144 20
Other real estate owned..	500 00	State deposits	7,500 00
Due from banks.....	23,193 08	Deposits subject to check.	84,596 61
Cash on hand.....	9,434 56	Demand certificates of de- posit	6,709 94
Expenses	11,413 81	Cashier's checks	916 39
		Time certificates of de- posit	11,521 80
		Savings deposits	52,552 24
Total.....	\$220,687 35	Total.....	\$220,687 35

TACOMA—PUGET SOUND STATE BANK.

H. N. TINKER, *President.*W. W. NEWSCHWANDER, *Asst. Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$759,721 73	Capital paid in.....	\$100,000 00
Overdrafts	11 41	Surplus fund	15,000 00
Bonds and warrants.....	26,979 06	Undivided profits	39,052 03
Stocks and other securi- ties	7,300 00	Due to banks.....	4,135 93
Furniture and fixtures...	7,000 00	State deposits	100,000 00
Other real estate owned..	10,449 40	Deposits subject to check.	444,013 66
Due from banks.....	100,414 61	Cashier's checks	4,490 89
Checks and other cash items	26 40	Time certificates of de- posit	62,370 26
Exchanges for clearing house	48,949 63	Savings deposits	222,665 64
Cash on hand.....	19,397 72	Certified checks	1,169 40
Expenses	12,647 85		
Total.....	\$992,897 81	Total.....	\$992,897 81

PIERCE COUNTY—CONTINUED.

TACOMA—SCANDINAVIAN AMERICAN BANK.

W. H. PRINGLE, *President.*E. C. JOHNSON, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts....	\$1,087,161 33	Capital paid in.....	\$200,000 00
Overdrafts	631 38	Surplus fund	10,000 00
Bonds and warrants....	751,115 36	Undivided profits	12,122 86
Stocks and other securi- ties	17,031 00	Due to banks.....	25,842 48
Banking house	200,000 00	State deposits	152,500 00
Furniture and fixtures..	32,671 88	Deposits subject to check	627,014 95
Other real estate owned..	74,991 46	Demand certificates of deposit	15,142 50
Due from banks.....	237,307 90	Cashier's checks	7,083 87
Checks and other cash items	7,580 20	Time certificates of de- posit	79,651 54
Exchanges for clearing house	15,433 74	Savings deposits	1,313,783 66
Cash on hand.....	84,644 60	Certified checks	4,229 38
Other	13,802 30	Bills payable	75,000 00
Total.....	\$2,522,371 24	Total.....	\$2,522,371 24

TACOMA—TACOMA SAVINGS BANK & TRUST COMPANY.

CHAS. H. HYDE, *President.*A. A. MILLER, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts ...	\$880,777 14	Capital paid in.....	\$200,000 00
Overdrafts	72 73	Surplus fund	20,000 00
Bonds and warrants....	200,007 41	Undivided profits	20,859 77
Due from banks.....	132,241 62	Trust funds	2,415 71
Exchanges for clearing house	5,741 19	State deposits	90,000 00
Cash on hand.....	51,371 60	Deposits subject to check	170,052 52
		Demand certificates of deposit	1,124 50
		Cashier's checks	4,087 72
		Time certificates of de- posit	24,888 41
		Savings deposits	735,565 76
		Certified checks	1,217 30
Total.....	\$1,270,211 69	Total.....	\$1,270,211 69

WILKESON—FIRST BANK OF WILKESON.

W. H. PRINGLE, *President.*T. J. ANDERSON, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$117,585 14	Capital paid in.....	\$15,000 00
Overdrafts	4 68	Surplus fund	3,000 00
Bonds and warrants.....	9,419 01	Undivided profits	8,913 59
Banking house	4,332 15	Postal savings deposits...	4,681 91
Furniture and fixtures...	3,600 00	Deposits subject to check.	35,637 69
Due from banks.....	11,548 98	Demand certificates of de- posit	2,079 83
Checks and other cash items	6 50	Savings deposits	99,563 32
Cash on hand.....	17,203 43	Certified checks	50
Expenses	5,176 95		
Total.....	\$168,876 84	Total.....	\$168,876 84

SAN JUAN COUNTY.

FRIDAY HARBOR—SAN JUAN COUNTY BANK.

GENE C. GOULD, *President.* VAN E. SARGENT, *Cashier.*

RESOURCES.			LIABILITIES.		
Loans and discounts.....	\$179,456	26	Capital paid in.....	35,000	00
Overdrafts	111	99	Surplus fund	12,500	00
Bonds and warrants.....	41,632	32	Undivided profits	6,731	47
Banking house	20,300	00	Postal savings deposits...	341	47
Furniture and fixtures...	1,500	00	Deposits subject to check.	88,390	24
Other real estate owned..	5,608	98	Demand certificates of de-		
Due from banks.....	33,810	82	posit	16,602	61
Checks and other cash			Time certificates of de-		
items	673	65	posit	109,432	58
Cash on hand.....	10,886	80	Savings deposits	24,786	55
Expenses	37	10	Certified checks	233	00
Total.....	\$294,017	92	Total.....	\$294,017	92

SKAGIT COUNTY.

ANACORTES—BANK OF COMMERCE.

DANIEL KELLEHER, *President.* FRED D. CARTWRIGHT, *Cashier.*

RESOURCES.			LIABILITIES.		
Loans and discounts.....	\$106,903	71	Capital paid in.....	\$25,000	00
Bonds and warrants.....	24,708	88	Undivided profits	4,395	72
Furniture and fixtures...	3,700	00	Postal savings deposits...	7,325	68
Other real estate owned..	39,743	04	Deposits subject to check.	102,447	70
Due from banks.....	11,099	00	Demand certificates of de-		
Checks and other cash			posit	635	00
items	820	65	Cashier's checks	985	91
Exchanges for clearing			Time certificates of de-		
house	825	75	posit	23,569	37
Cash on hand.....	15,505	93	Savings deposits	42,061	99
Expenses	3,900	41	Certified checks	786	00
Total.....	\$207,207	37	Total.....	\$207,207	37

ANACORTES—CITIZENS BANK.

M. B. MATTICE, *President.* W. J. MATTICE, *Cashier.*

RESOURCES.			LIABILITIES.		
Loans and discounts.....	\$131,702	83	Capital paid in.....	\$25,000	00
Overdrafts	585	44	Surplus fund	5,000	00
Bonds and warrants.....	38,472	83	Undivided profits	4,867	34
Banking house	12,000	00	Postal savings deposits...	10,000	00
Furniture and fixtures...	1,500	00	Deposits subject to check.	136,822	93
Other real estate owned..	20,290	23	Demand certificates of de-		
Due from banks.....	24,260	21	posit	6,223	56
Checks and other cash			Time certificates of de-		
items	187	95	posit	42,572	25
Exchanges for clearing			Savings deposits	12,473	88
house	423	08			
Cash on hand.....	10,893	59			
Expenses	2,643	80			
Total.....	\$242,959	96	Total.....	\$242,959	96

SKAGIT COUNTY—CONTINUED.

CLEAR LAKE—FIRST STATE BANK.

C. E. BINGHAM, *President.*

Q. R. BINGHAM, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$23,197 81
Overdrafts	3 00
Bonds and warrants.....	4,352 50
Banking house	2,300 00
Furniture and fixtures.....	1,700 00
Due from banks.....	9,872 73
Checks and other cash items	340 00
Cash on hand.....	10,646 19
Total.....	\$52,412 23

LIABILITIES.	
Capital paid in.....	\$10,000 00
Undivided profits	634 51
Deposits subject to check..	20,265 94
Cashier's checks	286 50
Time certificates of deposit	1,563 60
Savings deposits	19,661 68
Total.....	\$52,412 23

CONCRETE—STATE BANK OF CONCRETE.

J. C. WIXSON, *President.*

FRANK D. LEBOLD, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$32,263 21
Overdrafts	18 65
Bonds and warrants.....	438 84
Furniture and fixtures....	1,500 00
Other real estate owned...	2,000 00
Due from banks.....	13,046 93
Checks and other cash items	28 54
Cash on hand.....	3,415 37
Expenses	2,431 71
Total.....	\$55,143 25

LIABILITIES.	
Capital paid in.....	\$10,000 00
Surplus fund	2,000 00
Undivided profits	2,152 10
Deposits subject to check..	37,457 15
Time certificates of deposit	3,534 00
Total.....	\$55,143 25

*CONWAY—STATE BANK OF CONWAY.

JOHN S. FINSTAD, *President.*

A. GARBORG, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$24,252 32
Bonds and warrants.....	180 95
Banking house	3,312 11
Furniture and fixtures....	1,380 26
Due from banks.....	6,555 95
Checks and other cash items	25 00
Cash on hand.....	3,454 84
Expenses	992 38
Total.....	\$40,153 81

LIABILITIES.	
Capital paid in.....	\$10,000 00
Undivided profits	1,526 96
Deposits subject to check..	23,474 84
Demand certificates of de- posit	387 00
Time certificates of deposit	725 00
Savings deposits	4,040 01
Total.....	\$40,153 81

* Authorized June 21, 1915.

SKAGIT COUNTY—CONTINUED.

EDISON—FARMERS & MERCHANTS BANK.

N. B. HANNAY, *President.*

J. K. HANNAY, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$51,798 96
Overdrafts	28 15
Bonds and warrants.....	2,681 72
Banking house	3,000 00
Furniture and fixtures....	1,000 00
Other real estate owned...	2,200 78
Due from banks.....	892 01
Cash on hand.....	655 78
Expenses	2,094 44
Total.....	\$64,351 84

LIABILITIES.	
Capital paid in.....	\$12,000 00
Surplus fund	1,500 00
Undivided profits	4,365 61
Deposits subject to check..	32,395 30
Demand certificates of de- posit	569 28
Time certificates of deposit	8,521 65
Bills payable	5,000 00
Total.....	\$64,351 84

HAMILTON—HAMILTON STATE BANK.

J. H. SMITH, *President.*

C. W. STONE, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$25,727 82
Overdrafts	60 46
Bonds and warrants.....	10,200 00
Banking house	3,025 50
Furniture and fixtures....	1,639 50
Due from banks.....	6,462 16
Checks and other cash items	824 29
Cash on hand.....	2,972 74
Total.....	\$50,912 47

LIABILITIES.	
Capital paid in.....	\$10,000 00
Surplus fund	225 00
Undivided profits	798 86
State deposits	3,750 00
Deposits subject to check..	28,762 57
Cashier's checks	558 24
Time certificates of deposit	6,817 80
Total.....	\$50,912 47

LaCONNER—LaCONNER STATE BANK.

N. B. HANNAY, *President.*

W. S. PACKARD, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$110,824 58
Overdrafts	179 29
Bonds and warrants.....	13,115 10
Banking house	3,000 00
Furniture and fixtures...	1,500 00
Due from banks.....	21,756 38
Checks and other cash items	131 70
Cash on hand.....	2,176 61
Expenses	3,305 02
Total.....	\$155,988 68

LIABILITIES.	
Capital paid in.....	\$25,000 00
Surplus fund	5,000 00
Undivided profits	9,947 00
Postal savings deposits..	3,202 07
Deposits subject to check.	94,600 30
Demand certificates of de- posit	3,987 45
Time certificates of de- posit	12,751 86
Certified checks	1,500 00
Total.....	\$155,988 68

SKAGIT COUNTY—CONTINUED.

LYMAN—LYMAN STATE BANK.

G. A. MINKLER, *President.*F. C. FELLOWS, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$44,096 32
Overdrafts	407 39
Bonds and warrants.....	8,601 12
Stocks and other securi- ties	685 00
Banking house	1,973 40
Furniture and fixtures....	1,832 25
Other real estate owned...	1,661 17
Due from banks.....	9,790 88
Checks and other cash items	455 10
Cash on hand.....	1,110 90
Expenses	1,517 81
Total.....	\$72,131 34

LIABILITIES.	
Capital paid in.....	\$10,000 00
Surplus fund	2,000 00
Undivided profits	1,856 55
Deposits subject to check..	44,343 20
Demand certificates of de- posit	174 79
Time certificates of deposit	4,656 80
Re-discounts	4,100 00
Bills payable	5,000 00
Total.....	\$72,131 34

MT. VERNON—SKAGIT COUNTY SAVINGS BANK & TRUST CO.

GEO. D. MCLEAN, *President.*FRANK C. PICKERING, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$59,582 25
Overdrafts	30
Bonds and warrants.....	13,361 76
Banking house	7,387 17
Furniture and fixtures....	927 00
Due from banks.....	15,921 41
Exchanges for clearing house	640 99
Cash on hand.....	5,039 78
Expenses	2,309 75
Total.....	\$105,170 41

LIABILITIES.	
Capital paid in.....	\$25,000 00
Surplus fund	1,500 00
Undivided profits	7,387 32
Deposits subject to check.	38,042 93
Demand certificates of de- posit	337 35
Time certificates of de- posit	933 72
Savings deposits	29,832 33
Trust funds	2,136 76
Total.....	\$105,170 41

SEDRO WOOLLEY—C. E. BINGHAM & CO.

C. E. BINGHAM, *President.*Q. P. RENO, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$345,534 12
Overdrafts	2,314 78
Bonds and warrants.....	3,944 41
Furniture and fixtures....	5,000 00
Due from banks.....	67,147 62
Checks and other cash items	635 65
Cash on hand.....	40,330 09
Total.....	\$464,906 67

LIABILITIES.	
Capital paid in.....	\$50,000 00
Surplus fund	2,500 00
Undivided profits	13,396 07
Due to banks.....	18,554 70
Deposits subject to check.	227,142 40
Demand certificates of de- posit	3,762 60
Time certificates of de- posit	141,657 59
Savings deposits	7,893 31
Total.....	\$464,906 67

SKAMANIA COUNTY.

STEVENSON—BANK OF STEVENSON.

E. P. ASH, *President.*GEO. F. CHRISTENSEN, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$71,684 08	Capital paid in.....	\$10,000 00
Overdrafts	1,739 63	Surplus fund	5,000 00
Bonds and warrants.....	31,571 06	Undivided profits	7,240 41
Stocks and other securities	14,961 27	Deposits subject to check.	248,256 39
Banking house	4,900 00	Demand certificates of deposit	7,735 95
Furniture and fixtures...	3,121 00	Time certificates of deposit	12,081 59
Other real estate owned..	2,000 00		
Due from banks.....	149,577 45		
Checks and other cash items	577 05		
Cash on hand.....	4,101 86		
Expenses	6,080 94		
Total.....	\$290,314 34	Total.....	\$290,314 34

SNOHOMISH COUNTY.

ARLINGTON—ARLINGTON STATE BANK.

C. E. BINGHAM, *President.*C. H. TRACY, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$116,712 29	Capital paid in.....	\$25,000 00
Overdrafts	454 26	Surplus fund	5,000 00
Bonds and warrants.....	4,354 09	Undivided profits	7,661 57
Banking house	9,100 00	Deposits subject to check.	78,661 26
Furniture and fixtures...	3,150 00	Demand certificates of deposit	1,076 02
Due from banks.....	26,086 00	Time certificates of deposit	55,222 42
Checks and other cash items	373 63	Certified checks	383 35
Cash on hand.....	10,941 23		
Expenses	1,833 12		
Total.....	\$173,004 62	Total.....	\$173,004 62

ARLINGTON—CITIZENS STATE BANK.

J. B. RILEY, *President.*L. C. PALMER, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$147,909 29	Capital paid in.....	\$15,000 00
Overdrafts	354 83	Surplus fund	10,000 00
Bonds and warrants.....	12,542 84	Undivided profits	10,195 74
Banking house	5,000 00	Postal savings deposits...	297 77
Furniture and fixtures...	4,000 00	State deposits	10,000 00
Other real estate owned..	828 36	Deposits subject to check.	77,232 56
Due from banks.....	25,690 57	Demand certificates of deposit	3,255 38
Checks and other cash items	1,528 82	Cashier's checks	746 37
Cash on hand.....	11,999 14	Time certificates of deposit	40,414 56
Expenses	2,871 81	Savings deposits	45,415 78
		Certified checks	167 50
Total.....	\$212,725 66	Total.....	\$212,725 66

SNOHOMISH COUNTY—CONTINUED.

EDMONDS—STATE BANK OF EDMONDS.

L. W. LEWIS, *President.*

H. V. ALLEN, *Asst. Cashier.*

RESOURCES.	
Loans and discounts.....	\$58,802 10
Overdrafts	18 93
Bonds and warrants.....	4,477 42
Stocks and other securi- ties	590 68
Banking house	12,000 00
Furniture and fixtures...	2,000 00
Other real estate owned..	8,528 55
Due from banks.....	17,255 35
Cash on hand.....	4,512 01
Expenses	483 18
Total.....	\$108,668 22

LIABILITIES.	
Capital paid in.....	\$25,000 00
Surplus fund	3,450 00
Undivided profits	698 73
Deposits subject to check.	57,300 76
Demand certificates of de- posit	466 93
Cashier's checks	2,251 60
Time certificates of de- posit	12,959 46
Savings deposits	6,241 98
Certified checks	298 76
Total.....	\$108,668 22

EVERETT—BANK OF COMMERCE.

DANIEL KELLEHER, *President.*

E. C. OLSON, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$586,161 05
Overdrafts	85 50
Bonds and warrants.....	103,081 64
Stocks and other securi- ties	2,000 00
Banking house	10,500 00
Furniture and fixtures...	11,000 00
Other real estate owned..	1,695 02
Due from banks.....	107,947 10
Exchanges for clearing house	20,799 32
Cash on hand.....	46,971 88
Total.....	\$890,241 51

LIABILITIES.	
Capital paid in.....	\$100,000 00
Surplus fund	17,420 00
Undivided profits	4,662 40
Due to banks.....	9,996 67
Postal savings deposits...	12,613 23
State deposits	25,000 00
Deposits subject to check.	376,768 08
Demand certificates of de- posit	6,971 65
Cashier's checks	4,299 92
Time certificates of de- posit	53,448 45
Savings deposits	277,228 01
Certified checks	1,833 10
Total.....	\$890,241 51

EVERETT—CITIZENS BANK & TRUST COMPANY.

B. P. CASTNER, *President.*

J. L. LYEN, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$253,150 45
Overdrafts	1,398 39
Bonds and warrants.....	27,137 11
Stocks and other securi- ties	6,740 00
Furniture and fixtures....	16,640 91
Other real estate owned..	26,431 92
Due from banks.....	53,425 15
Checks and other cash items	5,389 00
Cash on hand.....	13,787 70
Expenses	7,531 50
Total.....	\$411,632 13

LIABILITIES.	
Capital paid in.....	\$100,000 00
Surplus fund	20,000 00
Undivided profits	9,819 35
Dividends unpaid	24 00
Due to banks.....	8,499 45
Postal savings deposits...	1,915 46
State deposits	25,000 00
Deposits subject to check.	169,402 73
Demand certificates of de- posit	370 00
Cashier's checks	2,090 09
Time certificates of de- posit	11,685 66
Savings deposits	61,862 24
Certified checks	963 15
Total.....	\$411,632 13

SNOHOMISH COUNTY—CONTINUED.

EVERETT—EVERETT TRUST AND SAVINGS BANK.

WM. C. BUTLER, *President.*

F. W. BROOKS, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$343,732 41	Capital paid in.....	\$25,000 00
Bonds and warrants.....	50,817 78	Surplus fund	25,000 00
Stocks and other securities	4,138 21	Undivided profits	12,876 13
Furniture and fixtures...	3,500 00	Postal savings deposits...	4,453 09
Other real estate owned..	6,545 58	Deposits subject to check.	72,032 92
Due from banks.....	72,576 46	Demand certificates of deposit	4,486 15
Checks and other cash items	2,558 69	Time certificates of deposit	26,771 75
Cash on hand.....	23,748 15	Savings deposits	336,997 24
Total.....	\$507,617 28	Total.....	\$507,617 28

GRANITE FALLS—GRANITE FALLS STATE BANK.

B. E. CHAPPELL, *President.*

C. E. STAGE, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$53,629 32	Capital paid in.....	\$15,000 00
Overdrafts	48 98	Surplus fund	530 78
Bonds and warrants.....	6,070 55	Undivided profits	3,985 02
Banking house	4,500 00	Deposits subject to check..	26,547 53
Furniture and fixtures...	2,279 40	Demand certificates of deposit	11 00
Other real estate owned...	6,606 73	Cashier's checks	1,867 42
Due from banks.....	3,250 17	Time certificates of deposit	11,469 52
Checks and other cash items	1 00	Savings deposits	14,051 16
Cash on hand.....	3,486 34	Certified checks	38 98
Expenses	3,628 94	Bills payable	10,000 00
Total.....	\$83,501 41	Total.....	\$83,501 41

*HARTFORD—THE RUCKER BANK.

B. J. RUCKER, *President.*

A. D. CAMPBELL, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$44,436 34	Capital paid in.....	\$10,000 00
Bonds and warrants.....	381 15	Undivided profits	1,802 37
Banking house	2,561 35	Due to banks.....	925 80
Furniture and fixtures...	1,808 10	Deposits subject to check..	36,910 56
Due from banks.....	14,306 25	Demand certificates of deposit	121 25
Cash on hand.....	4,362 01	Time certificates of deposit	6,137 34
		Savings deposits	11,954 88
		Certified checks	3 00
Total.....	\$67,855 20	Total.....	\$67,855 20

* Formerly private bank.

SNOHOMISH COUNTY—CONTINUED.

MARYSVILLE—MARYSVILLE STATE BANK.

S. T. SMITH, *President.*E. E. COLVIN, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$108,281 25	Capital paid in.....	\$25,000 00
Overdrafts	2 08	Surplus fund	5,000 00
Bonds and warrants.....	38,697 43	Undivided profits	4,542 45
Banking house	3,100 00	Postal savings deposits...	3,786 22
Furniture and fixtures...	1,945 64	Deposits subject to check.	81,607 07
Due from banks.....	45,917 33	Cashier's checks	4,524 33
Checks and other cash		Time certificates of de-	
items	184 74	posit	50,398 60
Cash on hand.....	7,285 04	Savings deposits	32,683 78
Expenses	2,128 94		
Total.....	\$207,542 45	Total.....	\$207,542 45

SNOHOMISH—COMMERCIAL BANK OF SNOHOMISH COUNTY.

HERMAN FRIESE, *President.*ALEX. LIVINGSTON, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$100,726 41	Capital paid in.....	\$25,000 00
Overdrafts	300 07	Undivided profits	9,091 79
Bonds and warrants.....	16,622 03	Postal savings deposits...	1,682 85
Banking house	10,000 00	Deposits subject to check.	57,949 75
Furniture and fixtures...	4,000 00	Demand certificates of de-	
Other real estate owned..	10,200 00	posit	941 87
Due from banks.....	7,049 40	Time certificates of de-	
Exchanges for clearing		posit	29,846 24
house	1,035 67	Savings deposits	36,187 52
Cash on hand.....	8,361 33	Bills payable	4,000 00
Expenses	6,405 11		
Total.....	\$164,700 02	Total.....	\$164,700 02

EAST STANWOOD—STATE BANK OF EAST STANWOOD.

A. GARBERG, *President.*C. R. AMUNDSON, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$72,002 43	Capital paid in.....	\$15,000 00
Overdrafts	193 65	Surplus fund	3,000 00
Bonds and warrants.....	3,673 91	Undivided profits	3,646 06
Banking house	3,606 87	Postal savings deposits...	878 17
Furniture and fixtures...	1,774 00	Deposits subject to check.	45,068 68
Due from banks.....	15,633 84	Demand certificates of de-	
Checks and other cash		posit	559 29
items	14 40	Cashier's checks	65 00
Cash on hand.....	4,026 03	Time certificates of de-	
Expenses	1,275 43	posit	12,453 98
		Savings deposits	21,529 38
Total.....	\$102,200 56	Total.....	\$102,200 56

SNOHOMISH COUNTY—CONTINUED.

STANWOOD—BANK OF STANWOOD.

W. C. BROKAW, *President.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$220,483 76	Capital paid in.....	\$25,000 00
Overdrafts	482 39	Surplus fund	10,000 00
Bonds and warrants.....	7,530 43	Undivided profits	5,778 74
Banking house	7,500 00	Deposits subject to check..	144,534 40
Furniture and fixtures...	1,000 00	Demand certificates of de-	
Other real estate owned..	2,140 00	posit	2,997 61
Due from banks.....	58,332 95	Cashier's checks	557 27
Checks and other cash		Time certificates of de-	
items	916 88	posit	49,567 96
Exchanges for clearing		Savings deposits	84,526 12
house	15 00		
Cash on hand.....	19,952 20		
Expenses	4,608 49		
Total.....	\$322,962 10	Total.....	\$322,962 10

SULTAN—CITIZENS BANK OF SULTAN.

JOHN F. WARNER, *President.*

W. M. JENKINS, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$24,619 10	Capital paid in.....	\$10,000 00
Bonds and warrants.....	14,268 62	Surplus fund	600 00
Banking house	1,865 00	Undivided profits	2,966 19
Furniture and fixtures....	1,881 75	Postal savings deposits....	832 27
Due from banks.....	11,145 49	Deposits subject to check..	38,015 23
Checks and other cash		Demand certificates of de-	
items	181 90	posit	175 00
Cash on hand.....	3,314 61	Cashier's checks	1,184 69
Expenses	2,829 95	Time certificates of deposit	5,387 05
		Savings deposits	945 99
Total.....	\$60,106 42	Total.....	\$60,106 42

SPOKANE COUNTY.

DEER PARK—FIRST STATE BANK.

F. A. REED, *President.*

EVAN BERG, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$65,835 77	Capital paid in.....	\$25,000 00
Overdrafts	91 80	Surplus fund	1,150 00
Bonds and warrants.....	4,029 17	Undivided profits	5,280 99
Stocks and other securi-		Deposits subject to check..	35,104 01
ties	59 17	Cashier's checks	1,072 69
Banking house	4,000 00	Time certificates of deposit	11,646 70
Furniture and fixtures....	1,435 00	Savings deposits	11,030 70
Other real estate owned...	4,373 29	Bills payable	4,740 00
Due from banks.....	7,428 59		
Checks and other cash			
items	17 30		
Cash on hand.....	4,075 74		
Expenses	3,679 26		
Total.....	\$95,025 09	Total.....	\$95,025 09

SPOKANE COUNTY—CONTINUED.

FAIRFIELD—BANK OF FAIRFIELD.

HENRY TREEDE, *President.*O. E. Moss, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$112,676 26	Capital paid in.....	\$12,000 00
Overdrafts	150 74	Surplus fund	2,400 00
Bonds and warrants.....	4,058 67	Undivided profits	4,789 06
Furniture and fixtures...	2,938 43	Due to banks.....	1 37
Due from banks.....	11,859 00	Deposits subject to check.	68,848 63
Cash on hand.....	8,222 54	Cashier's checks	1,104 67
Expenses	3,215 60	Time certificates of de-	
		posit	53,977 51
Total.....	\$143,121 24	Total.....	\$143,121 24

HILLYARD—HILLYARD STATE BANK.

W. W. COOPER, *President.*H. C. HOWE, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$172,688 52	Capital paid in.....	\$25,000 00
Bonds and warrants.....	12,098 85	Surplus fund	17,000 00
Banking house	4,000 00	Undivided profits	12,495 79
Furniture and fixtures...	3,000 00	Postal savings deposits...	1,909 66
Due from banks	75,197 62	Deposits subject to check.	110,314 16
Checks and other cash		Demand certificates of de-	
Items	33 11	posit	30,588 88
Cash on hand.....	10,281 98	Cashier's checks	122 29
Expenses	7,306 63	Savings deposits	87,175 93
Total.....	\$284,606 71	Total.....	\$284,606 71

LATAH—BANK OF LATAH.

WM. A. McEACHERN, *President.*A. L. FALER, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$60,279 54	Capital paid in.....	\$15,000 00
Bonds and warrants.....	5,718 22	Surplus fund	3,000 00
Banking house	3,650 00	Undivided profits	3,347 52
Furniture and fixtures....	2,038 00	Due to banks.....	1,989 56
Due from banks.....	19,594 52	Deposits subject to check..	52,626 11
Checks and other cash		Cashier's checks	4,975 03
Items	54 85	Time certificates of deposit	15,889 20
Cash on hand.....	2,921 73	Certified checks	1 00
Expenses	2,571 56		
Total.....	\$96,828 42	Total.....	\$96,828 42

SPOKANE COUNTY—CONTINUED.

ROCKFORD—FARMERS AND MERCHANTS BANK.

J. W. LOWE, *President.*ELSIE M. LOWE, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$78,794 74	Capital paid in.....	\$17,500 00
Overdrafts	93 59	Surplus fund	1,250 00
Bonds and warrants.....	817 78	Undivided profits	4,521 76
Banking house	5,300 00	Due to banks.....	240 43
Furniture and fixtures...	2,567 00	Deposits subject to check.	66,885 68
Due from banks.....	28,030 63	Cashier's checks	1,862 50
Exchanges for clearing house	7,128 12	Time certificates of de- posit	32,791 17
Cash on hand.....	2,919 68	Certified checks	600 00
Total.....	\$125,651 54	Total.....	\$125,651 54

SPANGLE—STATE BANK OF SPANGLE.

JOHN PETERS, *President.*O. W. NEWLON, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$82,993 11	Capital paid in.....	\$15,000 00
Overdrafts	15 05	Surplus fund	1,700 00
Banking house	3,500 00	Undivided profits	3,454 04
Furniture and fixtures...	2,775 00	Deposits subject to check.	55,666 83
Other real estate owned..	3,650 00	Demand certificates of de- posit	401 65
Due from banks.....	8,386 46	Cashier's checks	398 92
Cash on hand.....	4,618 77	Time certificates of de- posit	19,319 03
Expenses	450 28	Savings deposits	5,448 20
Total.....	\$106,388 67	Bills payable	5,000 00
		Total.....	\$106,388 67

SPOKANE—BANK OF MONTREAL.

W. DICK, *Manager.*

RESOURCES.		LIABILITIES.	
Loans and discounts....	\$56,175 93	Capital paid in.....	\$100,000 00
Overdrafts	2,349 50	Undivided profits	24,151 29
Furniture and fixtures...	2,000 00	Due to banks.....	34,194 37
Due from banks.....	1,540,430 46	Deposits subject to check	149,978 85
Checks and other cash items	2,019 45	Demand certificates of deposit	365 00
Exchanges for clearing house	8,338 48	Cashier's checks	3,388 72
Cash on hand.....	197,460 99	Time certificates of de- posit	28,970 10
Expenses	189 03	Savings deposits	1,467,915 51
Total.....	\$1,808,963 84	Total.....	\$1,808,963 84

SPOKANE COUNTY—CONTINUED.

SPOKANE—FARMERS & MECHANICS BANK.

ORRIS, DORMAN, *President.*ORTHO DORMAN, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$242,066 69	Capital paid in.....	\$50,000 00
Overdrafts	147 13	Surplus fund	3,000 00
Bonds and warrants.....	3,881 04	Undivided profits	5,233 59
Stocks and other securi- ties	11,123 50	Deposits subject to check.	149,809 01
Furniture and fixtures...	5,201 57	Demand certificates of de- posit	270 00
Other real estate owned..	22,306 53	Cashier's checks	2,548 60
Due from banks.....	23,233 61	Time certificates of de- posit	27,491 05
Checks and other cash items	352 81	Savings deposits	56,820 34
Exchanges for clearing house	5,500 15	Certified checks	83 50
Cash on hand.....	8,637 99	Re-discounts	5,635 00
Expenses	3,440 07	Bills payable	25,000 00
Total.....	\$325,891 09	Total.....	\$325,891 09

SPOKANE—LAND TITLE SAVINGS BANK.

Z. STEWART, *President.*GUST PEARSON, *Vice-President.*

RESOURCES.		LIABILITIES.	
Due from banks.....	\$17,717 18	Capital paid in.....	\$25,000 00
Cash on hand.....	7,515 97	Deposits subject to check..	231 15
		Savings	2 00
Total.....	\$25,233 15	Total.....	\$25,233 15

SPOKANE—SCANDINAVIAN AMERICAN BANK.

O. A. JOHNSON, *President.*O. LARSON, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$574,451 45	Capital paid in.....	\$100,000 00
Overdrafts	336 68	Surplus fund	25,000 00
Bonds and warrants.....	23,743 99	Undivided profits	19,347 21
Stocks and other securi- ties	1,000 00	Due to banks.....	71,947 25
Furniture and fixtures...	8,000 00	Deposits subject to check.	250,976 96
Other real estate owned..	36,685 92	Demand certificates of de- posit	91,172 39
Due from banks.....	152,684 36	Cashier's checks	14,577 90
Checks and other cash items	5,054 78	Savings deposits	261,683 60
Exchanges for clearing house	6,315 94	Certified checks	3,009 81
Cash on hand.....	29,492 00		
Total.....	\$837,715 12	Total.....	\$837,715 12

SPOKANE COUNTY—CONTINUED.

SPOKANE—SECURITY STATE BANK.

G. W. STOCKER, *President.*EARL W. EDGINGTON, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$81,728 73
Overdrafts	118 34
Bonds and warrants.....	16,681 17
Furniture and fixtures...	2,798 67
Due from banks.....	29,086 08
Checks and other cash items	422 54
Exchanges for clearing house	3,507 53
Cash on hand.....	6,275 03
Expenses	3,128 98
Total.....	\$143,747 07

LIABILITIES.	
Capital paid in.....	\$25,000 00
Surplus fund	500 00
Undivided profits	3,937 04
Deposits subject to check.	94,686 98
Cashier's checks	197 52
Time certificates of deposit	5,287 75
Savings deposits	14,157 78
Total.....	\$143,747 07

SPOKANE—SPOKANE & EASTERN TRUST COMPANY.

A. KUHN, *President.*R. L. RUTTER, *Vice-President.*

RESOURCES.	
Loans and discounts.....	\$5,017,325 21
Overdrafts	36 31
Bonds and warrants.....	815,841 12
Stocks and other securities	953,502 82
Banking house	364,849 22
Due from banks.....	2,404,748 69
Checks and other cash items	5,077 12
Exchanges for clearing house	78,336 64
Cash on hand.....	502,579 01
Expenses	41,881 25
Other	100 00
Total.....	\$10,184,277 39

LIABILITIES.	
Capital paid in.....	\$1,000,000 00
Surplus fund	200,000 00
Undivided profits	194,279 76
Dividends unpaid	450 00
Due to banks.....	2,159,692 34
Postal savings deposits..	19,952 05
State deposits	271,271 38
Deposits subject to check	3,199,533 91
Demand certificates of deposit	65,231 75
Cashier's checks and letters of credit.....	67,324 02
Time certificates of deposit	482,930 34
Savings deposits	2,509,576 19
Certified checks	8,035 65
Liability under bond....	6,000 00
Total.....	\$10,184,277 39

SPOKANE—SPOKANE STATE BANK.

J. A. ANDERSON, *President.*O. W. TUPPER, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$191,839 22
Overdrafts	1,776 21
Bonds and warrants.....	7,009 39
Stocks and other securities	2,819 95
Banking house	29,384 80
Furniture and fixtures...	2,782 20
Other real estate owned..	5,185 64
Due from banks.....	42,322 76
Checks and other cash items	12 00
Exchanges for clearing house	3,687 51
Cash on hand.....	5,665 90
Expenses	2,943 18
Total.....	\$295,428 76

LIABILITIES.	
Capital paid in.....	\$50,000 00
Surplus fund	10,000 00
Undivided profits	5,698 09
Due to banks.....	7 93
State deposits	10,000 00
Deposits subject to check.	154,576 42
Demand certificates of deposit	728 45
Cashier's checks	300 58
Time certificates of deposit	20,245 00
Savings deposits	43,872 29
Total.....	\$295,428 76

SPOKANE COUNTY—CONTINUED.

SPOKANE—UNION PARK BANK.

M. B. CONNELLY, *President.*FRANK J. GUSE, *Cashier.*

RESOURCES.			LIABILITIES.		
Loans and discounts.....	\$71,859	30	Capital paid in.....	\$25,000	00
Overdrafts		84	Surplus fund	2,000	00
Bonds and warrants.....	9,367	83	Undivided profits	3,108	20
Stocks and other securities	3,024	42	Deposits subject to check.	68,929	00
Furniture and fixtures...	3,200	00	Demand certificates of deposit	7,528	50
Other real estate owned..	5,550	00	Cashier's checks	157	32
Due from banks.....	33,233	67	Savings deposits	28,239	33
Checks and other cash items	339	78	Certified checks	100	00
Exchange for clearing house	3,446	55			
Cash on hand.....	3,323	50			
Expenses	1,716	46			
Total.....	\$135,062	35	Total.....	\$135,062	35

SPOKANE—UNION TRUST & SAVINGS BANK.

D. W. TWOHY, *President.*ARTHUR S. BLUM, *Cashier.*

RESOURCES.			LIABILITIES.		
Loans and discounts....	\$701,286	49	Capital paid in.....	\$500,000	00
Bonds and warrants....	161,285	74	Surplus fund	60,000	00
Stocks and other securities	25,078	00	Undivided profits	92,538	59
Banking house	200,000	00	Due to banks.....	155	13
Furniture and fixtures..	34,311	50	Postal savings deposits..	12,854	76
Other real estate.....	120,459	42	State deposits	65,000	00
Due from banks.....	14,766	47	Deposits subject to check	171,447	14
Exchanges for clearing house	32,143	43	Demand certificates of deposit	41,930	24
Cash on hand.....	14,716	18	Cashier's checks	46,393	93
Accounts receivable	43,711	58	Savings deposits	357,439	02
Total.....	\$1,347,758	81	Total.....	\$1,347,758	81

SPOKANE—WASHINGTON TRUST COMPANY.

M. B. CONNELLY, *President.*IRA W. BEDLE, *Cashier.*

RESOURCES.			LIABILITIES.		
Loans and discounts.....	\$531,241	82	Capital paid in.....	\$200,000	00
Overdrafts	16	63	Surplus fund	40,000	00
Bonds and warrants.....	19,850	58	Undivided profits	5,208	77
Stocks and other securities	27,057	00	Due to banks.....	29,034	09
Furniture and fixtures...	23,547	25	Deposits subject to check.	338,964	88
Other real estate owned..	68,286	45	Cashier's checks	1,552	45
Due from banks.....	181,414	04	Time certificates of deposit	59,832	56
Checks and other cash items	1,026	42	Savings deposits	208,299	48
Exchanges for clearing house	9,409	82	Special trust funds.....	52,546	36
Cash on hand.....	50,140	18			
Other	23,448	40			
Total.....	\$935,438	59	Total.....	\$935,438	59

SPOKANE COUNTY—CONTINUED.

WAVERLY—WAVERLY EXCHANGE BANK.

FRED KIENBAUM, *President.*RALPH M. DARKNELL, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$75,861 91	Capital paid in.....	\$10,000 00
Overdrafts	226 81	Surplus fund	1,800 00
Bonds and warrants.....	1,066 75	Undivided profits	4,562 88
Banking house	1,300 00	Deposits subject to check..	44,996 45
Furniture and fixtures...	1,300 00	Cashier's checks	6,820 82
Due from banks.....	14,723 79	Time certificates of de-	
Cash on hand.....	1,976 44	posit	22,267 57
Expenses	4,163 09	Savings deposits	171 07
		Bills payable	10,000 00
Total.....	\$100,618 79	Total.....	\$100,618 79

STEVENS COUNTY.

CHEWELAH—BANK OF CHEWELAH.

THOS. BOWERS, *President.*CHARLES ADAMS, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$62,043 52	Capital paid in.....	\$15,000 00
Overdrafts	581 82	Undivided profits	4,820 18
Bonds and warrants.....	8,441 73	State deposits	5,000 00
Banking house	7,449 06	Deposits subject to check..	42,024 88
Furniture and fixtures....	2,233 25	Demand certificates of de-	
Due from banks.....	8,057 83	posit	2,307 85
Checks and other cash		Cashier's checks	679 41
items	407 89	Time certificates of deposit	12,861 73
Cash on hand.....	3,848 68	Savings deposits	11,222 89
Expenses	4,708 66	Bills payable	3,855 00
Total.....	\$97,771 94	Total.....	\$97,771 94

COLVILLE—BANK OF COLVILLE.

C. W. WINTER, *President.*G. M. PEDDYCORD, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$302,715 83	Capital paid in.....	\$100,000 00
Overdrafts	1,294 73	Surplus fund	14,750 00
Bonds and warrants.....	48,539 13	Undivided profits	20,554 06
Stocks and other securi-		Dividends unpaid	62 50
ties	446 53	Due to banks.....	6,280 77
Banking house	28,209 93	Postal savings deposits...	1,716 75
Furniture and fixtures...	6,460 74	State deposits	15,000 00
Other real estate owned..	1,416 85	Deposits subject to check..	228,301 27
Due from banks.....	82,701 41	Demand certificates of de-	
Checks and other cash		posit	4,519 32
items	1,720 04	Time certificates of de-	
Cash on hand.....	17,756 96	posit	42,903 91
Expenses	15,498 40	Savings deposits	71,671 97
		Certified checks	1,000 00
Total.....	\$506,760 55	Total.....	\$506,760 55

STEVENS COUNTY—CONTINUED.

COLVILLE—COLVILLE LOAN & TRUST COMPANY.

C. H. CARROLL, *President.*

GEO. W. SEAL, *Secretary.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$90,088 35	Capital paid in.....	\$25,000 00
Overdrafts	390 26	Surplus fund	1,400 00
Bonds and warrants.....	1,455 61	Undivided profits	2,806 84
Furniture and fixtures...	4,175 00	Deposits subject to check..	61,681 23
Other real estate owned..	5,743 31	Demand certificates of de-	
Due from banks.....	4,639 36	posit	727 53
Checks and other cash		Cashier's checks	1,191 41
items	219 02	Time certificates of de-	
Cash on hand.....	14,045 65	posit	5,538 28
Expenses	1,972 55	Savings deposits	17,346 07
		Certified checks	22 75
		Re-discounts	7,015 00
Total.....	\$122,729 11	Total.....	\$122,729 11

SPRINGDALE—FARMERS & MERCHANTS BANK.

C. W. WINTER, *President.*

CHAS. O. SNAPP, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$36,299 65	Capital paid in.....	\$10,000 00
Overdrafts	8 85	Surplus fund	2,000 00
Bonds and warrants.....	7,222 87	Undivided profits	2,425 57
Banking house ..	2,000 00	Deposits subject to check..	29,124 54
Furniture and fixtures....	1,150 00	Demand certificates of de-	
Due from banks.....	10,802 67	posit	86 03
Checks and other cash		Time certificates of deposit	14,838 01
items	2 15	Savings deposits	4,865 88
Cash on hand.....	3,278 24		
Expenses	2,575 60		
Total.....	\$63,340 03	Total.....	\$63,340 03

THURSTON COUNTY.

TENINO—THE CITIZENS BANK.

S. M. PETERSON, *President.*

L. H. HUBBARD, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$26,237 50	Capital paid in.....	\$10,000 00
Overdrafts	27 18	Surplus fund	1,000 00
Bonds and warrants.....	70 00	Undivided profits	1,996 27
Banking house	3,000 00	Deposits subject to check..	20,066 38
Furniture and fixtures....	1,801 00	Demand certificates of de-	
Due from banks.....	651 16	posit	1,230 00
Checks and other cash		Time certificates of deposit	2,168 35
items	5 00		
Cash on hand.....	2,245 67		
Expenses	2,423 54		
Total.....	\$36,461 00	Total.....	\$36,461 00

WAHKIAKUM COUNTY.

CATHLAMET—WAHKIAKUM COUNTY BANK.

M. GORMAN, *President.*

TH. FAGSTAD, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$25,188 00	Capital paid in.....	\$10,000 00
Overdrafts	126 18	Surplus fund	3,000 00
Bonds and warrants.....	30,014 03	Undivided profits	4,512 46
Banking house	3,400 00	Postal savings deposits...	2,641 87
Furniture and fixtures...	2,360 00	Deposits subject to check.	101,273 73
Due from banks.....	64,075 18	Demand certificates of de-	
Checks and other cash		posit	982 50
items	15 70	Cashier's checks	212 22
Cash on hand.....	6,433 82	Time certificates of de-	
Expenses	3,516 61	posit	7,885 08
		Savings deposits	2,558 66
		Certified checks	2,062 50
Total.....	\$135,129 02	Total.....	\$135,129 02

WALLA WALLA COUNTY.

PRESCOTT—THE FIRST STATE BANK.

H. S. FENDER, *President.*

F. J. FLEISCHER, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$104,535 53	Capital paid in.....	\$25,000 00
Overdrafts	6,804 22	Surplus fund	3,000 00
Bonds and warrants.....	2,937 51	Undivided profits	5,502 36
Banking house	1,910 00	Due to banks.....	976 45
Furniture and fixtures...	2,315 00	Deposits subject to check.	72,224 32
Other real estate owned..	8,318 69	Time certificates of de-	
Due from banks.....	2,910 53	posit	16,911 85
Checks and other cash		Certified checks	10 80
items	166 76	Bills payable	15,000 00
Cash on hand.....	8,902 54		
Expenses	4,825 00		
Total.....	\$138,625 78	Total.....	\$138,625 78

*TOUCHET—TOUCHET STATE BANK.

H. H. HANSON, *President.*

O. L. RENN, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$28,969 39	Capital paid in.....	\$15,000 00
Bonds and warrants.....	3,767 73	Undivided profits	1,335 51
Banking house	4,000 00	Deposits subject to check..	24,311 80
Furniture and fixtures....	2,000 00	Demand certificates of de-	
Due from banks.....	5,646 90	posit	977 78
Cash on hand.....	2,708 75	Cashier's checks	434 80
Expenses	1,771 66	Time certificates of deposit	6,804 54
Total.....	\$48,864 43	Total.....	\$48,864 43

* Formerly private bank.

WALLA WALLA COUNTY—CONTINUED.

WAITSBURG—THE EXCHANGE BANK.

M. ZUGER, SR., *President.*H. P. PETERSON, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$289,633 21
Overdrafts	1,835 72
Banking house	10,000 00
Furniture and fixtures...	2,500 00
Due from banks.....	48,198 89
Checks and other cash items	1,215 96
Cash on hand.....	4,369 18
Expenses	11,824 44

Total.....\$369,577 40

LIABILITIES.	
Capital paid in.....	\$50,000 00
Surplus fund	20,000 00
Undivided profits	14,118 06
Dividends unpaid	385 00
Deposits subject to check.	76,606 55
Demand certificates of deposit	9,485 56
Time certificates of deposit	125,960 79
Savings deposits	8,021 44
Bills payable	65,000 00

Total.....\$369,577 40

WALLA WALLA—FARMERS SAVINGS BANK.

W. P. WINANS, *President.*J. CHITWOOD, *Cashier.*

RESOURCES.	
Loans and discounts....	\$817,216 62
Overdrafts	653 79
Bonds and warrants....	40,210 06
Furniture and fixtures...	5,000 00
Other real estate owned.	12,393 19
Due from banks.....	172,643 06
Checks and other cash items	6,907 43
Cash on hand.....	62,064 98
Expenses	12,834 38

Total.....\$1,129,923 51

LIABILITIES.	
Capital paid in.....	\$200,000 00
Surplus fund	40,000 00
Undivided profits	21,887 89
Dividends unpaid	1,560 50
Deposits subject to check	407,261 91
Demand certificates of deposit	12,174 34
Time certificates of deposit	412,925 30
Savings deposits	34,113 57

Total.....\$1,129,923 51

WALLA WALLA—PEOPLES STATE BANK.

H. H. MARSHALL, *President.*W. H. THARP, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$446,505 87
Overdrafts	68 96
Bonds and warrants....	14,001 20
Furniture and fixtures...	2,200 70
Due from banks.....	91,962 19
Exchanges for clearing house	8,946 75
Cash on hand.....	45,732 50
Expenses	10,591 87

Total.....\$620,010 04

LIABILITIES.	
Capital paid in.....	\$50,000 00
Surplus fund	20,000 00
Undivided profits	23,912 77
Deposits subject to check.	267,534 85
Demand certificates of deposit	5,860 59
Time certificates of deposit	61,266 48
Savings deposits	191,127 95
Certified checks	307 40

Total.....\$620,010 04

WHATCOM COUNTY.

BELLINGHAM—NORTHWESTERN STATE BANK.

I. J. ADAIR, *President.*B. F. DRAKE, *Cashier.*

RESOURCES.		
Loans and discounts....	\$580,860	21
Overdrafts	7,109	58
Bonds and warrants....	56,970	88
Banking house	25,000	00
Furniture and fixtures..	2,499	99
Due from banks.....	427,988	32
Checks and other cash Items	146	61
Exchanges for clearing house	6,847	18
Cash on hand.....	44,249	60
Expenses	6,853	51
Total.....	\$1,158,525	88

LIABILITIES.		
Capital paid in.....	\$100,000	00
Surplus fund	25,000	00
Undivided profits	21,693	66
Dividends unpaid	10	00
Due to banks.....	2,649	44
Postal savings deposits..	13,387	76
Deposits subject to check	683,293	31
Demand certificates of deposit	3,896	57
Time certificates of de- posit	64,100	00
Savings deposits	240,655	56
Certified checks	3,839	58
Total.....	\$1,158,525	88

BLAINE—HOME STATE BANK.

G. A. WILLISON, *President.*O. K. MIDDLETON, *Cashier.*

RESOURCES.		
Loans and discounts.....	\$125,897	66
Overdrafts	905	09
Bonds and warrants....	7,771	60
Banking house	15,500	00
Furniture and fixtures...	2,000	00
Other real estate owned..	105	97
Due from banks.....	20,403	17
Checks and other cash Items	403	53
Cash on hand.....	6,035	75
Expenses	2,306	03
Total.....	\$181,328	80

LIABILITIES.		
Capital paid in.....	\$25,000	00
Surplus fund	5,000	00
Undivided profits	5,994	26
Postal savings deposits...	3,458	12
Deposits subject to check.	75,531	63
Demand certificates of de- posit	270	41
Time certificates of de- posit	30,107	93
Savings deposits	27,341	45
Certified checks	25	00
Re-discounts	8,600	00
Total.....	\$181,328	80

BLAINE—STATE BANK OF BLAINE.

JOHN NICOLL, *President.*LOUIS H. MOORE, *Cashier.*

RESOURCES.		
Loans and discounts.....	\$67,999	55
Overdrafts	1,302	09
Bonds and warrants....	13,760	88
Banking house	7,750	00
Furniture and fixtures...	1,750	00
Other real estate owned..	6,200	00
Due from banks.....	24,143	23
Checks and other cash Items	614	90
Cash on hand.....	4,851	86
Expenses	5,779	64
Total.....	\$134,152	15

LIABILITIES.		
Capital paid in.....	\$25,000	00
Surplus fund	5,000	00
Undivided profits	7,310	44
Postal savings deposits..	1,082	98
Deposits subject to check.	68,772	38
Time certificates of de- posit	9,910	41
Savings deposits	7,075	94
Re-discounts	10,000	00
Total.....	\$134,152	15

WHATCOM COUNTY—CONTINUED.

CUSTER—CUSTER STATE BANK.

A. W. STONE, *President.*A. F. STONE, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$25,986 98
Bonds and warrants.....	114 44
Banking house	2,521 48
Furniture and fixtures....	1,612 63
Due from banks.....	6,315 37
Checks and other cash Items	66 36
Cash on hand.....	1,936 11
Expenses	1,624 57
Total.....	\$40,177 94

LIABILITIES.	
Capital paid in.....	\$10,000 00
Surplus fund	50 00
Undivided profits	1,731 19
Deposits subject to check..	22,168 58
Cashier's checks	253 50
Time certificates of deposit	5,209 38
Savings deposits	749 04
Certified checks	16 25
Total.....	\$40,177 94

EVERSON—NOOKSACK VALLEY STATE BANK.

B. BOLLERUD, *President.*HENRY P. JOHNSON, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$58,711 64
Overdrafts	287 40
Bonds and warrants.....	605 90
Banking house	5,000 00
Furniture and fixtures....	1,983 40
Other real estate owned...	1,800 00
Due from banks.....	6,520 67
Checks and other cash Items	23 05
Cash on hand.....	5,510 86
Expenses	5,194 97
Total.....	\$85,637 89

LIABILITIES.	
Capital paid in.....	\$15,000 00
Surplus fund	450 00
Undivided profits	6,330 18
Deposits subject to check..	46,518 58
Demand certificates of de- posit	705 30
Time certificates of deposit	16,633 83
Total.....	\$85,637 89

FERNDAL—FERNDAL STATE BANK.

H. E. CAMPBELL, *President.*PERCY HOOD, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$65,443 00
Overdrafts	152 89
Bonds and warrants.....	10,429 69
Banking house	7,200 00
Furniture and fixtures....	2,240 00
Due from banks.....	42,353 62
Cash on hand.....	5,934 85
Expenses	5,197 31
Total.....	\$138,951 36

LIABILITIES.	
Capital paid in.....	\$15,000 00
Surplus fund	5,000 00
Undivided profits	8,029 51
Postal savings deposits...	1,582 42
Deposits subject to check.	82,652 42
Demand certificates of de- posit	127 23
Time certificates of de- posit	26,528 38
Certified checks	31 40
Total.....	\$138,951 36

WHATCOM COUNTY—CONTINUED.

LYNDEN—LYNDEN STATE BANK.

P. M. SERRURRIER, *President.*

W. B. VANDER GRIEND, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$180,788 34
Overdrafts	902 83
Bonds and warrants.....	25,380 16
Banking house	8,000 00
Furniture and fixtures...	5,690 00
Other real estate owned..	29,901 16
Due from banks.....	13,048 08
Checks and other cash items	1,380 07
Cash on hand.....	9,604 30
Total.....	\$274,694 94

LIABILITIES.	
Capital paid in.....	\$25,000 00
Surplus fund	10,000 00
Undivided profits	6,139 23
Dividends unpaid	50 00
Postal savings deposits...	3,558 37
Deposits subject to check.	136,066 39
Demand certificates of de- posit	5,937 27
Time certificates of de- posit	36,675 79
Savings deposits	39,006 29
Certified checks	261 60
Bills payable	12,000 00
Total.....	\$274,694 94

SUMAS—GARRISON BROS. STATE BANK.

L. A. GARRISON, *President.*

F. S. GARRISON, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$97,582 02
Overdrafts	8 68
Bonds and warrants.....	21,787 73
Stocks and other securi- ties	3,000 00
Banking house	10,000 00
Furniture and fixtures...	2,100 00
Due from banks.....	47,733 54
Checks and other cash items	27 77
Cash on hand.....	6,693 05
Expenses	3,870 82
Total.....	\$192,803 61

LIABILITIES.	
Capital paid in.....	\$40,000 00
Surplus fund	6,000 00
Undivided profits	7,012 39
Deposits subject to check.	97,863 14
Demand certificates of de- posit	4,863 67
Time certificates of de- posit	15,529 53
Savings deposits	21,372 64
Certified checks	162 24
Total.....	\$192,803 61

WHITMAN COUNTY.

ALBION—ALBION STATE BANK.

W. E. LAWSON, *President.*

A. R. McCLASKEY, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$110,225 44
Overdrafts	2,778 97
Bonds and warrants.....	137 10
Stocks and other securi- ties	1,520 00
Banking house	1,650 00
Furniture and fixtures...	1,850 00
Other real estate owned..	2,127 50
Due from banks.....	6,227 24
Checks and other cash items	2,551 04
Cash on hand.....	1,031 01
Expenses	5,904 44
Total.....	\$136,002 74

LIABILITIES.	
Capital paid in.....	\$25,000 00
Surplus fund	2,300 00
Undivided profits	2,913 62
Due to banks.....	1,499 55
Deposits subject to check.	45,805 43
Demand certificates of de- posit	1,495 20
Time certificates of de- posit	16,941 43
Savings deposits	1,679 46
Re-discounts	5,368 05
Bills payable	33,000 00
Total.....	\$136,002 74

WHITMAN COUNTY—CONTINUED.

COLFAX—COLFAX STATE BANK.

J. K. McCORNACK, *President.*R. F. BIGELOW, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$156,926 68	Capital paid in.....	\$60,000 00
Overdrafts	60 75	Surplus fund	2,000 00
Bonds and warrants.....	3,959 51	Undivided profits	7,422 74
Stocks and other securities	818 08	Deposits subject to check.	63,840 29
Furniture and fixtures...	3,500 00	Demand certificates of deposit	2,755 67
Other real estate owned..	4,010 79	Cashier's checks	1,278 59
Due from banks.....	14,467 92	Time certificates of deposit	46,302 16
Checks and other cash items	289 16	Savings deposits	9,735 58
Cash on hand.....	8,490 63		
Expenses	811 49		
Total.....	\$193,335 01	Total.....	\$193,335 01

COLFAX—FIRST SAVINGS & TRUST BANK OF WHITMAN COUNTY.

ALFRED COOLIDGE, *President.*H. G. DE PLEDGE, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$219,878 92	Capital paid in.....	\$50,000 00
Overdrafts	11	Surplus fund	12,500 00
Bonds and warrants.....	305 00	Undivided profits	13,681 21
Stocks and other securities	2,994 51	Deposits subject to check.	101,791 94
Banking house	12,500 00	Cashier's checks	6,992 23
Furniture and fixtures...	500 00	Time certificates of deposit	5,630 32
Other real estate owned..	853 12	Savings deposits	124,051 58
Due from banks.....	64,644 67		
Checks and other cash items	976 97		
Cash on hand.....	9,706 01		
Expenses	2,287 97		
Total.....	\$314,647 28	Total.....	\$314,647 28

COLTON—COLTON STATE BANK.

M. SCHULTHEIS, JR., *President.*A. B. SNIDER, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$134,352 49	Capital paid in.....	\$15,000 00
Overdrafts	113 46	Surplus fund	3,000 00
Bonds and warrants.....	286 61	Undivided profits	5,909 56
Stocks and other securities	85 40	Deposits subject to check.	84,828 33
Banking house	5,000 00	Cashier's checks	810 26
Furniture and fixtures...	2,804 50	Time certificates of deposit	42,830 08
Other real estate owned..	6,351 90	Re-discounts	4,000 00
Due from banks.....	12,546 58	Bills payable	15,000 00
Checks and other cash items	10 00		
Cash on hand.....	2,772 61		
Expenses	7,054 68		
Total.....	\$171,378 23	Total.....	\$171,378 23

WHITMAN COUNTY—CONTINUED.

ELBERTON—ELBERTON STATE BANK.

J. F. LONG, *President.*R. B. WALKER, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$37,716 78	Capital paid in.....	\$10,000 00
Overdrafts	107 78	Surplus fund	800 00
Bonds and warrants.....	33 00	Undivided profits	2,922 30
Banking house	1,968 00	Deposits subject to check..	25,852 46
Furniture and fixtures....	1,400 00	Demand certificates of de-	
Other real estate.....	800 00	posit	2,639 80
Due from banks.....	9,384 71	Cashier's checks	378 33
Checks and other cash		Time certificates of deposit	12,139 09
items	28 50	Certified checks	162 80
Cash on hand.....	783 41		
Expenses	2,672 60		
Total.....	\$54,894 78	Total.....	\$54,894 78

ENDICOTT—THE BANK OF ENDICOTT.

M. A. SHERMAN, *President.*M. A. SHERMAN, JR., *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$141,267 35	Capital paid in.....	\$25,000 00
Overdrafts	341 79	Surplus fund	7,500 00
Bonds and warrants.....	780 98	Undivided profits	7,126 93
Furniture and fixtures....	1,577 13	State deposits	5,000 00
Due from banks.....	8,368 08	Deposits subject to check.	72,095 76
Cash on hand.....	5,408 00	Demand certificates of de-	
Expenses	6,918 39	posit	1,649 53
		Time certificates of de-	
		posit	21,227 52
		Certified checks	70 98
		Re-discounts	10,000 00
		Bills payable	15,000 00
Total.....	\$164,670 72	Total.....	\$164,670 72

FARMINGTON—THE BANK OF FARMINGTON.

ALFRED COOLIDGE, *President.*W. CLAUDE RENFREW, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$121,526 11	Capital paid in.....	\$25,000 00
Overdrafts	970 72	Surplus fund	5,000 00
Banking house	2,000 00	Undivided profits	10,922 23
Furniture and fixtures....	1,000 00	Due to banks.....	210 65
Other real estate owned..	556 20	Deposits subject to check.	106,870 07
Due from banks.....	43,413 69	Demand certificates of de-	
Cash on hand.....	3,363 00	posit	10,668 10
Expenses	5,275 64	Cashier's checks	399 50
		Time certificates of de-	
		posit	19,034 81
Total.....	\$178,105 36	Total.....	\$178,105 36

WHITMAN COUNTY—CONTINUED.

GARFIELD—FIRST STATE BANK.

R. A. JOHNSON, *President.*I. M. MCCARTHY, *Cashier.*

RESOURCES.		
Loans and discounts.....	\$177,049	43
Overdrafts	2,151	65
Banking house	23,200	00
Furniture and fixtures...	2,000	00
Other real estate owned..	7,438	14
Due from banks.....	13,680	36
Checks and other cash items	6,022	09
Cash on hand.....	8,011	10
Expenses	4,586	27
Total.....	\$244,139	04

LIABILITIES.		
Capital paid in.....	\$50,000	00
Surplus fund	10,000	00
Undivided profits	6,306	75
Deposits subject to check.	94,241	08
Demand certificates of de- posit	3,885	36
Cashier's checks	59,705	85
Bills payable	20,000	00
Total.....	\$244,139	04

JOHNSON—FARMERS STATE BANK.

A. O. WHITE, *President.*FRANK WILLOUGHBY, *Cashier.*

RESOURCES.		
Loans and discounts.....	\$43,248	91
Overdrafts	503	31
Banking house	2,500	00
Furniture and fixtures....	1,198	15
Due from banks.....	9,431	63
Checks and other cash items	55	05
Cash on hand.....	526	16
Expenses	3,190	53
Total.....	\$60,653	74

LIABILITIES.		
Capital paid in.....	\$10,000	00
Surplus fund	1,200	00
Undivided profits	1,936	10
Deposits subject to check..	23,712	96
Time certificates of deposit	12,304	68
Bills payable	11,500	00
Total.....	\$60,653	74

LaCROSSE—FIRST STATE BANK.

P. B. STRAVENS, *President.*IRA M. CAMP, *Cashier.*

RESOURCES.		
Loans and discounts.....	\$267,476	29
Overdrafts	1,392	05
Banking house	9,297	28
Furniture and fixtures...	3,319	20
Other real estate owned..	854	19
Due from banks.....	6,155	30
Cash on hand.....	8,617	95
Expenses	6,053	18
Total.....	\$303,165	44

LIABILITIES.		
Capital paid in.....	\$60,000	00
Surplus fund	6,700	00
Undivided profits	10,817	19
Dividends unpaid	20	00
Due to banks.....	2,901	98
Deposits subject to check.	90,308	01
Demand certificates of de- posit	1,164	66
Cashier's checks	4,701	94
Time certificates of de- posit	21,012	48
Savings deposits	24,161	18
Re-discounts	27,878	00
Bills payable	53,500	00
Total.....	\$303,165	44

WHITMAN COUNTY—CONTINUED.

LaCROSSE—SECURITY STATE BANK.

F. L. GORDON, *President.*

J. E. MOORE, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$71,040 09	Capital paid in.....	\$15,000 00
Overdrafts	862 59	Surplus fund	1,575 00
Furniture and fixtures....	2,000 00	Undivided profits	6,313 48
Due from banks.....	12,906 95	Deposits subject to check..	32,891 69
Checks and other cash		Demand certificates of de-	
items	22 60	posit	293 22
Cash on hand.....	2,283 52	Cashier's checks	1,891 05
Expenses	5,958 04	Time certificates of deposit	17,802 68
		Savings deposits	6,206 67
		Bills payable	13,100 00
Total.....	\$95,073 79	Total.....	\$95,073 79

LAMONT—LAMONT STATE BANK.

E. A. SHIELDS, *President.*

B. J. ELLIS, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$121,089 61	Capital paid in.....	\$10,000 00
Overdrafts	523 40	Surplus fund	2,000 00
Bonds and warrants.....	726 89	Undivided profits	1,773 00
Stocks and other securi-		Deposits subject to check.	75,481 32
ties	498 60	Demand certificates of de-	
Furniture and fixtures...	2,499 00	posit	26 98
Other real estate owned..	636 06	Cashier's checks	2,767 48
Due from banks.....	15,423 31	Time certificates of de-	
Checks and other cash		posit	16,740 48
items	60 11	Re-discounts	36,970 00
Cash on hand.....	4,302 28		
Total.....	\$145,759 26	Total.....	\$145,759 26

MALDEN—FARMERS-MERCHANTS STATE BANK.

L. F. ROHLEDER, *President.*

EDWIN T. TAYLOR, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$127,457 68	Capital paid in.....	\$20,000 00
Overdrafts	1,179 47	Surplus fund	2,500 00
Bonds and warrants.....	6,287 14	Undivided profits	7,533 80
Stocks and other securi-		Postal savings deposits...	2,003 40
ties	2,073 99	Deposits subject to check.	68,608 34
Banking house	10,250 00	Demand certificates of de-	
Furniture and fixtures...	4,738 00	posit	5,344 63
Other real estate owned..	491 10	Cashier's checks	197 65
Due from banks.....	4,320 11	Time certificates of de-	
Checks and other cash		posit	23,718 09
items	1,452 33	Savings deposits	22,001 86
Cash on hand.....	7,449 28	Bills payable	23,000 00
Expenses	9,208 67		
Total.....	\$174,907 77	Total.....	\$174,907 77

WHITMAN COUNTY—CONTINUED.

OAKESDALE—COMMERCIAL STATE BANK.

E. H. HANFORD, *President.*H. W. HANFORD, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$272,178 54
Overdrafts	447 40
Bonds and warrants.....	921 13
Stocks and other securities	770 00
Banking house	3,300 00
Furniture and fixtures...	2,750 00
Due from banks.....	44,204 50
Cash on hand.....	5,726 80
Expenses	6,968 29
Total.....	\$337,261 46

LIABILITIES.	
Capital paid in.....	\$25,000 00
Surplus fund	5,000 00
Undivided profits	13,943 45
Due to banks.....	986 85
Deposits subject to check. .	187,198 67
Demand certificates of deposit	929 37
Time certificates of deposit	104,203 12
Total.....	\$337,261 46

PALOUSE—SECURITY STATE BANK.

J. K. McCORNACK, *President.*JOHN P. DUKE, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$318,604 34
Overdrafts	858 45
Bonds and warrants.....	1,000 00
Stocks and other securities	2,092 26
Banking house	15,000 00
Furniture and fixtures...	4,596 17
Other real estate owned..	6,983 94
Due from banks.....	19,067 78
Checks and other cash items	136 04
Cash on hand.....	15,079 72
Other	179 80
Total.....	\$383,598 50

LIABILITIES.	
Capital paid in.....	\$60,000 00
Surplus fund	12,000 00
Undivided profits	11,299 13
Due to banks.....	973 49
Deposits subject to check. .	146,194 76
Demand certificates of deposit	17,781 84
Time certificates of deposit	135,349 28
Total.....	\$383,598 50

*PINE CITY—PINE CITY STATE BANK.

A. J. STONE, *President.*W. O. PALMER, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$75,862 77
Overdrafts	3,648 49
Stocks and other securities	650 00
Banking house	4,918 67
Furniture and fixtures....	2,000 00
Other real estate owned..	4,410 00
Due from banks.....	6,143 98
Checks and other cash items	1,625 17
Cash on hand.....	1,311 61
Expenses	2,594 77
Total.....	\$102,660 46

LIABILITIES.	
Capital paid in.....	\$15,000 00
Undivided profits	2,400 96
Deposits subject to check. .	59,334 12
Demand certificates of deposit	13,496 99
Cashier's checks	599 91
Time certificates of deposit	6,828 48
Bills payable	5,000 00
Total.....	\$102,660 46

* Formerly private bank.

WHITMAN COUNTY—CONTINUED.

PULLMAN—PULLMAN STATE BANK.

R. C. McCROSKEY, President.

E. MAGUIRE, Cashier.

RESOURCES.			LIABILITIES.		
Loans and discounts.....	\$368,626	17	Capital paid in.....	\$37,500	00
Overdrafts	6,864	53	Surplus fund	10,000	00
Bonds and warrants.....	5,544	14	Undivided profits	25,451	18
Banking house	17,236	00	Dividends unpaid	120	00
Furniture and fixtures...	2,938	09	Postal savings deposits...	1,084	98
Other real estate owned..	16,550	55	Deposits subject to check.	237,791	09
Due from banks.....	33,884	37	Demand certificates of de-		
Checks and other cash			posit	5,029	11
items	813	87	Time certificates of de-		
Exchanges for clearing			posit	133,376	08
house	5,192	33	Certified checks	55	20
Cash on hand.....	20,425	60	Bills payable	46,088	41
Expenses	18,420	40			
Total.....	\$496,496	05	Total.....	\$496,496	05

ROSALIA—BANK OF ROSALIA.

EDWIN T. COMAN, President.

CLARK E. RATHKE, Cashier.

RESOURCES.			LIABILITIES.		
Loans and discounts.....	\$184,959	92	Capital paid in.....	\$25,000	00
Overdrafts	459	46	Surplus fund	5,000	00
Bonds and warrants.....	1,056	11	Undivided profits	12,008	70
Stocks and other securi-			State deposits	20,000	00
ties	501	00	Deposits subject to check.	85,630	16
Banking house	6,500	00	Demand certificates of de-		
Furniture and fixtures...	2,000	00	posit	30,225	17
Other real estate.....	1	00	Cashier's checks	2,321	50
Due from banks.....	13,642	43	Savings deposits	17,088	30
Checks and other cash			Bills payable	30,000	00
items	1,648	63			
Cash on hand.....	8,179	83			
Expenses	8,325	45			
Total.....	\$227,273	83	Total.....	\$227,273	83

ST. JOHN—FARMERS STATE BANK.

W. S. IMBLER, President.

HERBERT F. IMBLER, Cashier.

RESOURCES.			LIABILITIES.		
Loans and discounts.....	\$66,020	72	Capital paid in.....	\$20,000	00
Overdrafts	879	20	Surplus fund	2,000	00
Banking house	3,507	45	Undivided profits	4,038	05
Furniture and fixtures...	1,957	20	Deposits subject to check..	39,195	97
Due from banks.....	7,298	21	Demand certificates of de-		
Checks and other cash			posit	862	79
items	2,760	05	Time certificates of deposit	9,000	00
Cash on hand.....	2,576	42	Savings deposits	2,000	86
Expenses	4,598	42	Bills payable	12,500	00
Total.....	\$89,597	67	Total.....	\$89,597	67

WHITMAN COUNTY—CONTINUED.

ST. JOHN—ST. JOHN STATE BANK.

H. C. FISHER, *President.*HARRY TERHUNE, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$206,549 42	Capital paid in.....	\$25,000 00
Overdrafts	3,417 00	Surplus fund	5,000 00
Bonds and warrants.....	846 72	Undivided profits	1,621 97
Banking house	2,250 00	Indian deposits	9,148 81
Furniture and fixtures...	2,250 00	Deposits subject to check.	128,612 52
Due from banks.....	33,764 92	Demand certificates of de-	
Checks and other cash		posit	14,712 26
items	550 03	Time certificates of de-	
Cash on hand.....	10,066 70	posit	24,503 43
Expenses	1,301 10	Savings deposits	7,401 90
		Bills payable	45,000 00
Total.....	\$260,995 89	Total.....	\$260,995 89

STEPTOE—STEPTOE STATE BANK.

LEWIS STAIRET, *President.*M. C. HANDLEY, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$47,806 82	Capital paid in.....	\$20,000 00
Overdrafts	77 81	Surplus fund	704 25
Bonds and warrants.....	70 00	Undivided profits	763 71
Banking house	834 80	Deposits subject to check..	24,476 54
Furniture and fixtures....	1,713 25	Time certificates of deposit	6,974 34
Due from banks.....	8,107 84	Bills payable	10,000 00
Checks and other cash			
items	2,252 49		
Cash on hand.....	995 50		
Expenses	1,560 83		
Total.....	\$62,918 84	Total.....	\$62,918 84

TEKOA—CITIZENS STATE BANK.

A. B. WILLARD, *President.*R. S. KALBFLEISCH, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$195,020 12	Capital paid in.....	\$25,000 00
Overdrafts	919 23	Surplus fund	3,000 00
Bonds and warrants.....	1,574 97	Undivided profits	8,342 39
Furniture and fixtures...	2,722 50	Postal savings deposits...	388 14
Other real estate owned..	1,993 69	Deposits subject to check.	118,825 95
Due from banks.....	23,850 53	Demand certificates of de-	
Checks and other cash		posit	3,548 36
items	337 97	Time certificates of de-	
Exchanges for clearing		posit	59,638 75
house	1,856 41	Savings deposits	14,424 30
Cash on hand.....	9,928 72	Bills payable	10,000 00
Expenses	4,963 75		
Total.....	\$243,167 89	Total.....	\$243,167 89

WHITMAN COUNTY—CONTINUED.

TEKOA—TEKOA STATE BANK.

D. W. TRUAX, *President.*

O. D. MCKEEHEN, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$204,408 15
Overdrafts	429 32
Bonds and warrants.....	2,430 17
Furniture and fixtures....	2,000 00
Due from banks.....	27,070 25
Checks and other cash Items	79 08
Exchanges for clearing house	288 67
Cash on hand.....	10,899 45
Expenses	5,421 62
Total.....	\$252,926 71

LIABILITIES.	
Capital paid in.....	\$30,000 00
Surplus fund	6,000 00
Undivided profits	13,830 95
Postal savings deposit...	542 03
Deposits subject to check.	100,385 15
Demand certificates of de- posit	7,841 67
Time certificates of de- posit	67,458 88
Savings deposits	26,868 03
Total.....	\$252,926 71

*THORNTON—COMEGYS, HANFORD & MILLER BANK.

H. W. HANFORD, *President.*

RALPH COMEGYS, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$100,309 88
Overdrafts	234 00
Stocks and other securi- ties	500 00
Banking house	3,000 00
Furniture and fixtures...	1,500 00
Due from banks.....	10,670 71
Checks and other cash Items	9 40
Cash on hand.....	3,805 60
Expenses	2,586 10
Total.....	\$122,615 69

LIABILITIES.	
Capital paid in.....	\$15,000 00
Undivided profits	3,809 36
Deposits subject to check.	81,833 03
Demand certificates of de- posit	79 70
Time certificates of de- posit	21,893 60
Total.....	\$122,615 69

* Formerly private bank.

UNIONTOWN—FARMERS STATE BANK.

S. HILLIARD, *President.*

C. W. BEAN, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$146,368 36
Overdrafts	201 68
Bonds and warrants.....	378 20
Banking house	5,000 00
Other real estate owned..	1,000 00
Due from banks.....	13,848 98
Cash on hand.....	3,181 59
Expenses	9,197 54
Total.....	\$179,176 35

LIABILITIES.	
Capital paid in.....	\$10,000 00
Surplus fund	1,000 00
Undivided profits	10,801 93
Due to banks.....	16 25
State deposits	80,033 22
Deposits subject to check.	5,926 78
Demand certificates of de- posit	550 01
Cashier's checks	28,078 81
Time certificates of de- posit	15,769 35
Re-discounts	27,000 00
Total.....	\$179,176 35

WHITMAN COUNTY—CONTINUED.

WINONA—BANK OF WINONA.

W. C. MORROW, President.

LOUIS EILERT, Cashier.

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$104,595 08	Capital paid in.....	\$15,000 00
Overdrafts	233 76	Surplus fund	2,594 28
Banking house	2,540 25	Undivided profits	6,360 49
Furniture and fixtures...	1,908 64	Deposits subject to check.	64,182 59
Due from banks.....	11,639 73	Demand certificates of de-	
Cash on hand.....	1,419 01	posit	50 00
Expenses	4,432 76	Time certificates of de-	
		posit	12,861 57
		Re-discounts	25,720 30
Total.....	\$126,769 23	Total.....	\$126,769 23

YAKIMA COUNTY.

GRANDVIEW—GRANDVIEW STATE BANK.

E. O. KECK, President.

A. W. HAWN, Cashier.

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$105,780 06	Capital paid in.....	\$10,000 00
Overdrafts	514 51	Surplus fund	3,000 00
Bonds and warrants.....	1,538 46	Undivided profits	2,543 19
Banking house	4,560 00	Deposits subject to check.	81,884 31
Furniture and fixtures...	3,200 00	Demand certificates of de-	
Due from banks.....	23,674 70	posit	1,738 10
Checks and other cash		Time certificates of de-	
Items	776 85	posit	44,309 44
Cash on hand.....	4,260 21	Certified checks	829 75
Total.....	\$144,304 79	Total.....	\$144,304 79

GRANGER—THE UNION BANK.

H. C. DAVIS, President.

A. C. SNOWDEN, Cashier.

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$56,541 96	Capital paid in.....	\$10,000 00
Overdrafts	264 48	Surplus fund	5,000 00
Bonds and warrants.....	2,345 20	Undivided profits	1,478 31
Banking house	4,500 00	State deposits	47,068 43
Furniture and fixtures...	2,500 00	Deposits subject to check..	1,702 84
Due from banks.....	6,180 20	Cashier's checks	10,283 76
Checks and other cash		Savings deposits	30 00
Items	225 00		
Cash on hand.....	2,653 98		
Expenses	352 52		
Total.....	\$75,563 34	Total.....	\$75,563 34

YAKIMA COUNTY—CONTINUED.

MABTON—MABTON BANK.

A. T. CARLSON, *President.*EARL LARRISON, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$114,638 17	Capital paid in.....	\$25,000 00
Overdrafts	1,898 90	Surplus fund	600 00
Bonds and warrants.....	2,051 30	Undivided profits	8,037 98
Stocks and other securi- ties	225 00	Deposits subject to check.	68,619 58
Banking house	2,309 38	Demand certificates of de- posit	1,668 37
Furniture and fixtures...	2,918 86	Time certificates of de- posit	25,366 77
Other real estate owned..	7,870 96	Savings deposits	7,637 15
Due from banks.....	13,175 07	Certified checks	57 00
Checks and other cash items	101 96	Bills payable	20,000 00
Cash on hand.....	5,623 01		
Expenses	6,174 24		
Total.....	\$156,986 85	Total.....	\$156,986 85

MOXEE CITY—THE MOXEE STATE BANK.

L. H. DESMARAIS, *President.*J. E. McGRATH, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$27,482 47	Capital paid in.....	\$10,000 00
Overdrafts	49 08	Surplus fund	1,000 00
Bonds and warrants.....	45 75	Undivided profits	2,106 82
Stocks and other securi- ties	60 00	Deposits subject to check..	24,742 12
Banking house	2,074 00	Demand certificates of de- posit	228 05
Furniture and fixtures...	2,425 00	Time certificates of deposit	2,694 97
Due from banks.....	4,579 68		
Checks and other cash items	158 50		
Cash on hand.....	967 82		
Expenses	2,929 66		
Total.....	\$40,771 96	Total.....	\$40,771 96

NACHES—NACHES STATE BANK.

W. GOODSSELL, *President.*J. R. REYNOLDS, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$48,257 95	Capital paid in.....	\$10,000 00
Overdrafts	110 13	Surplus fund	6,500 00
Bonds and warrants.....	36 44	Undivided profits	140 00
Banking house	2,500 00	Deposits subject to check..	40,212 37
Furniture and fixtures...	2,000 00	Demand certificates of de- posit	749 86
Other real estate owned...	2,935 60	Time certificates of deposit	4,831 50
Due from banks.....	13,057 84	Savings deposits	3,814 25
Checks and other cash items	120 04	Bills payable	5,000 00
Cash on hand.....	2,229 98		
Total.....	\$71,247 98	Total.....	\$71,247 98

YAKIMA COUNTY—CONTINUED.

NORTH YAKIMA—CENTRAL BANK AND TRUST COMPANY.

W. R. PHILLIPS, *President.*ALFRED B. HOOD, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$131,055 16	Capital paid in.....	\$50,000 00
Overdrafts	2,170 39	Surplus fund	500 00
Bonds and warrants.....	2,105 27	Undivided profits	11,338 45
Furniture and fixtures....	12,000 00	Due to banks.....	1,200 80
Other real estate owned..	6,071 30	Deposits subject to check.	88,696 25
Due from banks.....	18,239 43	Demand certificates of de-	
Checks and other cash		posit	393 00
items	775 39	Cashier's checks	23 40
Exchanges for clearing		Time certificates of de-	
house	2,459 84	posit	3,481 19
Cash on hand.....	3,506 18	Savings deposits	7,993 99
Expenses	10,256 62	Certified checks	12 50
		Bills payable	25,000 00
Total.....	\$188,639 58	Total.....	\$188,639 58

NORTH YAKIMA—YAKIMA TRUST COMPANY.

H. C. LUCAS, *President.*E. P. HOFFMAN, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$357,068 72	Capital paid in.....	\$100,000 00
Overdrafts	1,889 77	Surplus fund	16,000 00
Bonds and warrants.....	35,942 14	Undivided profits	27,097 19
Stocks and other securi-		Due to banks.....	981 79
ties	600 00	State deposits	25,000 00
Banking house	62,723 60	Deposits subject to check.	325,646 28
Furniture and fixtures...	7,575 43	Demand certificates of de-	
Other real estate owned..	9,386 11	posit	5,710 75
Due from banks.....	111,003 88	Cashier's checks	12 31
Checks and other cash		Time certificates of de-	
items	1,870 41	posit	43,167 47
Exchanges for clearing		Savings deposits	98,720 45
house	9,333 50	Certified checks	372 00
Cash on hand.....	31,199 86	Trust funds	10,085 39
Expenses	24,200 21		
Total.....	\$652,793 63	Total.....	\$652,793 63

NORTH YAKIMA—YAKIMA VALLEY BANK.

O. A. FECHTER, *President.*CHAS. HEATH, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$538,562 21	Capital paid in.....	\$100,000 00
Overdrafts	1,686 40	Surplus fund	8,500 00
Bonds and warrants.....	11,844 18	Undivided profits	14,953 78
Furniture and fixtures...	11,815 00	Due to banks.....	20,436 13
Other real estate owned..	2,324 00	Postal savings deposits...	4,272 81
Due from banks.....	139,708 77	Deposits subject to check.	395,590 66
Checks and other cash		Demand certificates of de-	
items	1,814 94	posit	9,408 76
Exchanges for clearing		Cashier's checks	7,468 75
house	8,296 78	Time certificates of de-	
Cash on hand.....	42,064 14	posit	77,362 57
Expenses	10,036 62	Savings deposits	128,972 09
		Certified checks	1,187 49
Total.....	\$768,153 04	Total.....	\$768,153 04

YAKIMA COUNTY—CONTINUED.

OUTLOOK—OUTLOOK STATE BANK.

W. H. NORMAN, *President.*H. E. SCHROEDER, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$31,294 94
Overdrafts	387 56
Bonds and warrants.....	2,154 72
Banking house	600 00
Furniture and fixtures....	900 00
Other real estate owned...	9,000 00
Due from banks.....	3,154 64
Checks and other cash items	177 27
Cash on hand.....	1,066 46
Expenses	2,259 01
Total.....	\$50,994 60

LIABILITIES.	
Capital paid in.....	\$10,000 00
Undivided profits	2,571 77
Deposits subject to check..	23,952 99
Demand certificates of de- posit	868 75
Time certificates of deposit	3,740 02
Savings deposits	3,966 07
Bills payable	5,895 00
Total.....	\$50,994 60

SELAH—SELAH STATE BANK.

C. S. SUNDBERG, *President.*ELMER DAHLIN, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$45,688 64
Overdrafts	467 57
Bonds and warrants.....	419 63
Banking house	3,100 00
Furniture and fixtures....	900 00
Due from banks.....	41,576 11
Checks and other cash items	51 70
Cash on hand.....	1,440 76
Expenses	2,877 50
Total.....	\$96,521 91

LIABILITIES.	
Capital paid in.....	\$15,000 00
Surplus fund	3,500 00
Undivided profits	4,570 18
Deposits subject to checks.	59,489 01
Demand certificates of de- posit	3,625 64
Time certificates of deposit	10,337 08
Total.....	\$96,521 91

SUNNYSIDE—THE SUNNYSIDE BANK.

R. G. PAGE, *President.*C. VINCENT ZOOK, *Cashier.*

RESOURCES.	
Loans and discounts.....	\$177,315 51
Overdrafts	2,027 10
Bonds and warrants.....	4,820 31
Banking house	19,000 00
Furniture and fixtures...	3,000 00
Other real estate owned...	6,560 40
Due from banks.....	25,521 34
Checks and other cash items	212 82
Cash on hand.....	11,129 54
Total.....	\$249,587 02

LIABILITIES.	
Capital paid in.....	\$50,000 00
Surplus fund	18,000 00
Undivided profits	447 09
Deposits subject to check.	110,384 53
Demand certificates of de- posit	747 26
Cashier's checks	6,839 89
Time certificates of de- posit	50,286 06
Savings deposits	7,882 19
Bills payable	5,000 00
Total.....	\$249,587 02

YAKIMA COUNTY—CONTINUED.

TOPPENISH—CENTRAL BANK OF TOPPENISH.

H. M. GILBERT, *President.*H. B. MILLER, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$85,834 49	Capital paid in.....	\$50,000 00
Overdrafts	611 66	Undivided profits	5,007 22
Bonds and warrants.....	862 09	Due to banks.....	2,118 05
Banking house	41,066 03	Deposits subject to check.	71,769 03
Furniture and fixtures...	3,089 81	Demand certificates of de-	
Other real estate owned..	1,094 56	posit	3,078 43
Due from banks.....	4,864 27	Cashier's checks	2,377 20
Checks and other cash		Time certificates of de-	
items	29 91	posit	8,048 75
Exchanges for clearing		Savings deposits	5,098 53
house	421 80	Certified checks	152 00
Cash on hand.....	7,331 00		
Expenses	2,442 09		
Total.....	\$147,649 21	Total.....	\$147,649 21

TOPPENISH—THE TRADERS BANK.

J. D. CORNETT, *President.*W. S. DORAN, *Cashier.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$126,020 08	Capital paid in.....	\$25,000 00
Overdrafts	129 63	Surplus fund	5,000 00
Bonds and warrants.....	11,209 63	Undivided profits	6,523 06
Furniture and fixtures...	2,383 00	Due to banks.....	8,012 65
Other real estate owned..	2,834 94	Deposits subject to check.	138,184 76
Due from banks.....	67,848 43	Demand certificates of de-	
Checks and other cash		posit	2,145 78
items	340 83	Time certificates of de-	
Exchanges for clearing		posit	12,968 30
house	365 16	Savings deposits	25,021 63
Cash on hand.....	10,560 45	Letters of credit.....	1,025 00
Expenses	2,189 12		
Total.....	\$223,881 27	Total.....	\$223,881 27

REPORT OF TRUST COMPANIES AT CLOSE OF BUSINESS OCTOBER 31, 1915.

KING COUNTY.

SEATTLE—SEATTLE TRUST COMPANY.

J. E. CHILBERG, *President.*

A. F. BAILEY, *Secretary-Treasurer.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$55,055 30	Capital paid in.....	\$250,000 00
Bonds and warrants.....	3,265 75	Surplus fund	75,000 00
Stocks and other securi- ties	199,051 92	Undivided profits	10,041 02
Other real estate owned..	66,858 85	Deposits of trust funds and escrow accounts...	48,250 33
Due from banks.....	33,767 45		
Checks and other cash items	1,041 90		
Cash on hand.....	718 51		
Accounts receivable	16,294 06		
Expenses	7,237 61		
Total.....	\$383,291 35	Total.....	\$383,291 35

SEATTLE—TITLE TRUST COMPANY.

J. W. MAXWELL, *President.*

CHARLTON L. HALL, *Secretary.*

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$111,600 86	Capital paid in.....	\$250,000 00
Bonds and warrants.....	9,366 63	Surplus fund	25,000 00
Stocks and other securi- ties	162,200 71	Undivided profits	25,952 13
Furniture and fixtures...	6,000 00	Dividends unpaid	210 94
Other real estate owned..	14,342 33	Trust accounts	4,901 23
Due from banks.....	7,492 24	Current real estate loan accounts	13,616 74
Trust funds	4,901 23	Escrow and other agency accounts	2,565 49
Cash on hand.....	534 76		
Real estate contracts.....	1,466 94		
Advances to trusts.....	149 70		
Expenses	4,191 13		
Total.....	\$322,246 53	Total.....	\$322,246 53

SEATTLE—UNION TRUST COMPANY.

WATSON C. SQUIRE, *President.*

RESOURCES.		LIABILITIES.	
Real estate contracts.....	\$8,841 30	Capital paid in.....	\$500,000 00
Notes and mortgages on real estate	1,004 60	Surplus fund	86,805 90
Other real estate owned..	576,960 00		
Total.....	\$586,805 90	Total.....	\$586,805 90

KING COUNTY—CONTINUED.

SEATTLE—UNITED STATES TRUST COMPANY.

SAMUEL HILL, *President.*EBEN F. WELLS, *Secretary.*

RESOURCES.		LIABILITIES.	
Stocks and other securities	\$1,500,000 00	Capital paid in	\$500,000 00
		Surplus fund	1,000,000 00
Total	\$1,500,000 00	Total	\$1,500,000 00

OKANOGAN COUNTY.

OROVILLE—UNION TITLE AND TRUST COMPANY.

S. C. MITCHELL, *President.*L. L. WORK, *Secretary.*

RESOURCES.		LIABILITIES.	
Loans and discounts	\$9,078 26	Capital paid in	\$40,000 00
Stocks and other securities	29,648 33	Surplus fund	400 00
Furniture and fixtures	732 32	Undivided profits	1,069 00
Other real estate owned	11,265 66	Bills payable	11,477 80
Due from banks	95 48	Collections	121 50
Fees advanced to clients	342 07		
Expenses	1,906 34		
Total	\$53,068 46	Total	\$53,068 46

SPOKANE COUNTY.

SPOKANE—CLARK BROS. & KLEIN TRUST CO.

P. W. CLARK, *President.*J. B. CLARK, *Secretary.*

RESOURCES.		LIABILITIES.	
Loans and discounts	\$1,150 00	Capital paid in	\$15,000 00
Due from banks	45,962 22	Undivided profits	759 00
Cash on hand	147 44	Due to individuals	20,348 00
Advances	3,152 73	Trust deposit	7,671 00
Expenses	144 64	Collections	6,777 00
Total	\$50,557 03	Total	\$50,557 03

SPOKANE COUNTY—CONTINUED.

SPOKANE—WASHINGTON SAFE DEPOSIT & TRUST CO.

WM. S. McCREA, *President.*

WALTER G. MERRYWEATHER,
Vice-President and Secretary.

RESOURCES.		LIABILITIES.	
Loans and discounts.....	\$43,393 75	Capital paid in.....	\$100,000 00
Stocks and other securities	67,161 25	Surplus fund	143,442 76
Furniture and fixtures....	22,020 00	Undivided profits	7,882 69
Other real estate owned..	213,457 19	Due to banks.....	10,000 00
Due from banks.....	4,216 59	Due to individuals.....	91,948 00
Cash on hand.....	259 04		
Expenses	2,765 63		
Total.....	\$353,273 45	Total.....	\$353,273 45

WALLA WALLA COUNTY.

WALLA WALLA—WALLA WALLA SAFETY DEPOSIT & TRUST CO.

W. P. LATHROP, *President.*

T. A. PAUL, *Cashier.*

RESOURCES.		LIABILITIES.	
Furniture and fixtures....	\$4,000 00	Capital paid in.....	\$4,000 00
Total.....	\$4,000 00	Total.....	\$4,000 00

TENTH ANNUAL REPORT
OF THE
State Bank Examiner
OF THE
STATE OF WASHINGTON

DECEMBER 31, 1916

BY
W. E. HANSON
State Bank Examiner

OLYMPIA :
FRANK M. LAMBORN  **PUBLIC PRINTER**
1917

ROSTER OF THE BANKING DEPARTMENT.

W. E. HANSON, *State Bank Examiner*.....Olyn
C. S. MOODY, *Deputy State Bank Examiner*.....Olyn
CLAUDE P. HAY, *Deputy State Bank Examiner*.....Su
LOUIS H. MOORE, *Deputy State Bank Examiner*.....Sea
R. A. LANGLEY, *Special Deputy State Bank Examiner*.....Olyn
NORA E. HARRY, *Secretary*.....Olyn
KATHERINE B. HAY, *Assistant*.....Olyn

STATE BANKING DEPARTMENT.

STATE OF WASHINGTON.

OLYMPIA, WASH., December 31, 1916.

*Honorable Ernest Lister, Governor of the State of Washington,
Olympia:*

SIR: In accordance with section thirty-eight (38), chapter two hundred twenty-five (225), of the Session Laws of the State of Washington for 1907, I have the honor to submit herewith the tenth annual report of this department, which exhibits the condition of two hundred seventy-nine (279) state banks and trust companies, and nine (9) trust companies not acting in a banking capacity, operating in this state at the close of business at date of last call, November 17, 1916.

TENTH ANNUAL REPORT OF THE STATE BANK EXAMINER.

During the year 1916, five reports were asked for and made to this department, on the same dates reports were made by the national banks to the Comptroller of the Currency, to-wit: March 7th, May 1st, June 30th, September 12th and November 17th.

During the year, eleven state banks and trust companies were organized and authorized to do business by this department. There were eight consolidations, one failure and one bank reopened for business.

Three hundred ninety-nine (399) regular examinations were made, according to law, of state banks and their branches, and trust companies, including those that are doing a banking business as well as those doing exclusively a trust business. For these services, fees were collected amounting to \$16,653.84. The fee is \$25 for each examination and 1/200 of 1 per cent. of the deposits at the date of examination.

Deposits of state institutions have increased \$32,207,157.59 since the last report of 1915, as shown by the following comparative statement of condition. This is the largest increase in deposits in the history of the state. The farming communities have enjoyed good crops and exceptionally high prices for all produce and grain raised. Conditions in the lumber districts of the state have greatly improved in the past few months; practically all of the mills that have been closed for the past two or three years have resumed business, and in most instances have enlarged their plants.

Total Resources and Liabilities of 279 State Banks and Nine Trust Companies in the State of Washington, at Close of Business on November 17, 1916, Compared With Call of November 10, 1915, Reported by 276 State Banks and Eight Trust Companies.

RESOURCES.

	<i>Nov. 10, 1915.</i>	<i>Nov. 17, 1916.</i>
Loans on real estate.....	\$12,948,402 78	\$14,107,624 05
Other loans and discounts.....	56,761,810 05	70,895,676 09
Overdrafts	222,835 28	312,746 08
Bonds and warrants.....	13,905,349 88	17,736,614 25
Stocks and other securities.....	2,899,236 62	3,250,464 30
Banking house	4,937,864 78	5,615,286 26
Furniture and fixtures.....	1,095,309 05	1,099,673 72
Other real estate owned.....	3,949,793 18	4,299,798 91
Due from banks.....	21,535,810 21	32,184,443 14
Checks and cash items.....	422,742 00	549,589 80
Exchanges for clearing house.....	695,108 72	939,350 63
Cash on hand.....	6,474,824 38	6,886,158 32
Expenses	1,617,698 26	1,892,489 34
Letters of credit.....		86,792 17
Other resources	36,969 32	48,742 51
Acceptances		200,000 00
Total resources	\$127,503,254 51	\$159,605,449 57

LIABILITIES.

Capital stock	\$15,621,700 00	\$15,847,700 00
Surplus	4,390,379 39	4,447,160 89
Undivided profits	3,732,048 98	4,424,645 44
Dividends unpaid	6,734 44	4,316 59
Due to banks.....	5,733,031 68	11,545,356 60
City, county and state deposits.....	2,293,574 54	2,764,090 35
Postal savings deposits.....	636,192 05	663,805 10
Deposits subject to check.....	42,741,389 58	58,362,582 41
Demand certificates	1,919,902 50	2,685,477 32
Cashier's checks	543,074 80	924,662 36
Time certificates	8,770,902 02	11,811,303 49
Savings deposits	38,712,375 19	44,351,146 38
Certified checks	141,878 34	219,622 14
Trust funds	148,703 43	431,360 94
Letters of credit.....	3,355 00	92,179 63
Re-discounts	358,860 53	87,707 45
Bills payable	1,669,164 91	685,679 78
Other liabilities	79,987 13	56,702 70
Acceptances		200,000 00
Total liabilities	\$127,503,254 51	\$159,605,449 57

Total deposits, November 10, 1915.....	\$101,644,379 13
Total deposits, November 17, 1916.....	\$133,851,536 72
Gain	\$32,207,157 59

On January 4th, 1916, this department took charge of the affairs of the Cowlitz County Bank of Kalama, Washington. Claims amounting to \$112,493.74 have been filed against the bank. Two dividends have been paid to creditors, amounting to 25%. There remains, at this time, unpaid claims amounting

to \$74,261.58. This department has rejected, as preferred claims, the claims of the city of Kalama for \$7,287.14 and Nils Olson for \$494.95, and has allowed them as common claims. No dividends have been paid on them, as both cases are now pending in the superior court of Cowlitz county.

The affairs of the First International Bank of South Bend, Washington, which bank was closed by this department on July 19th, 1915, are being adjusted under considerable difficulty, being in such a tangled condition that it has been necessary to appeal to the courts in most instances, for adjustment.

Claims have been filed and approved amounting to.	\$163,428 98
Claims filed but not adjusted.....	18,532 45
Claims filed as preferred and allowed.....	71 50
Claims rejected.....	7,888 77
Preferred claims rejected.....	2,682 58

The following summary of "due from banks," or the deposits of state institutions with their reserve agents, shows that a larger percentage of the reserves at this time are with other state institutions than at the last annual report.

DUE FROM BANKS.

	Nov. 10, 1915.	Nov. 17, 1916.
Due from national banks outside of the state..	\$5,936,202 94	\$8,292,284 43
Due from national banks in the state.....	8,207,863 95	12,435,132 62
Total due from national banks.....	\$14,144,066 89	\$20,727,417 05
Due from state banks outside of the state....	\$2,075,856 95	\$4,005,995 13
Due from state banks in the state.....	2,561,026 62	4,449,310 80
Total due from state banks.....	\$4,636,883 57	\$8,455,305 93
Due from sundry banks, including foreign countries	\$2,754,859 75	\$3,001,720 16
Total due from banks.....	\$21,535,810 21	\$32,184,443 14

A new banking code has been drafted and will be presented to the legislature for passage. I have been consulted in the drafting of this code and am familiar with its contents and I do not hesitate to recommend it for passage, as I believe that it contains all the essentials necessary to a good banking code. It is a great improvement over our present bank and trust company laws, for the banker as well as the depositor.

Respectfully submitted,

W. E. HANSON,
State Bank Examiner.

EXPENSES AND RECEIPTS.

Expenses from January 1, 1916, to December 31, 1916, inclusive, consist of the following:

Salaries	\$11,800 00
Traveling, office and other expenses.....	5,895 27

Total expenses of department.....	\$17,695 27
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Receipts of the department from January 1, 1916, to December 31, 1916, inclusive, are as follows:

Fees for examinations.....	\$16,653 84
Miscellaneous receipts, filing reports, fines assessed, etc.....	462 55

Total receipts of department.....	\$17,116 39
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Detailed statement of money received:

Examination Fees.

<i>Received from</i>	<i>Amount.</i>
Bank of Commerce, Everett (Pine St. Branch).....	\$32 30
Bank of Commerce, Everett.....	58 40
Citizens State Bank, Auburn.....	28 55
Everett Trust & Savings Bank, Everett.....	47 10
Vashon State Bank, Vashon.....	29 50
Ridgefield State Bank, Ridgefield.....	27 35
Citizens Bank, Bremerton.....	34 50
The Mabton Bank, Mabton.....	30 25
Grant County Bank, Ephrata.....	30 40
State Bank of Spangle, Spangle.....	28 80
Comegys, Hanford & Miller Bank, Thornton.....	30 75
Orting State Bank, Orting.....	29 55
Columbia Valley Bank, Wenatchee.....	50 70
Castle Rock Bank, Castle Rock.....	33 35
Citizens State Bank, Tekoa.....	33 45
Mansfield State Bank, Mansfield.....	30 65
Little Falls State Bank, Vader.....	27 80
Farmers & Merchants Bank, Centralia.....	45 75
Centralia State Bank, Centralia.....	34 10
Pe Ell State Bank, Pe Ell.....	25 90
Douglas County Bank, Waterville.....	46 15
Withrow State Bank, Withrow.....	31 90
Dexter Horton Trust & Savings Bank, Seattle.....	225 00
Waterville Savings Bank, Waterville.....	34 65
State Bank of Shelton, Shelton.....	41 10
Citizens Bank of Georgetown, Seattle.....	30 55
Bremerton Trust & Savings Bank, Bremerton.....	30 00
West Seattle State Bank, Seattle.....	27 30
Bank of Clallam County, Port Angeles.....	43 10
State Bank of Concrete, Concrete.....	27 25
Bank of Commerce, Anacortes.....	33 25
Waverly Exchange Bank, Waverly.....	28 10
Arlington State Bank, Arlington.....	31 70
Citizens State Bank, Arlington.....	33 70
State Bank of Battleground, Battleground.....	25 90
Northwest Trust & Safe Deposit Co., Seattle.....	107 10
Bank of Rosalia, Rosalia.....	34 60

<i>Received from</i>	<i>Amount.</i>
Citizens Bank & Trust Co., Everett.....	\$38 30
Commercial State Bank, Oakesdale.....	40 30
Bank of Winona, Winona.....	27 80
Merchants Bank, Port Townsend.....	51 80
Oakville State Bank, Oakville.....	26 95
Brooks & Company Bank, Goldendale.....	31 45
The Bank of Endicott, Endicott.....	30 65
Farmers State Bank, Centerville.....	28 45
Harrington State Bank, Harrington.....	33 75
Almira State Bank, Almira.....	40 80
Elberton State Bank, Elberton.....	27 30
State Bank of Wilbur, Wilbur.....	47 60
State Bank of Sequim, Sequim.....	27 85
Ione State Bank, Ione.....	29 10
Security State Bank, Newport.....	36 05
Kitsap County Bank, Port Orchard.....	31 00
Union State Bank, Odessa.....	47 25
Creston State Bank, Creston.....	32 40
Bank of Farmington, Farmington.....	30 95
Metaline Falls State & Savings Bank, Metaline Falls.....	27 60
Bank of Montreal, Spokane.....	108 30
Lamont State Bank, Lamont.....	32 30
Security State Bank, Spokane.....	32 45
Farmers & Merchants Bank, Odessa.....	28 25
Warden State Bank, Warden.....	26 65
Liberty Bay Bank, Poulsbo.....	31 05
Moxee State Bank, Moxee City.....	26 50
Scandinavian American Bank, Spokane.....	58 45
State Bank of Morton, Morton.....	26 80
Tolt State Bank, Tolt.....	27 15
The Sunnyside Bank, Sunnyside.....	34 20
Union Bank, Granger.....	27 95
Metropolitan Bank, Seattle.....	140 25
Spokane & Eastern Trust Co., Spokane.....	225 00
Grandview State Bank, Grandview.....	31 50
Touchet State Bank, Touchet.....	27 00
Peoples Savings Bank, Seattle.....	136 10
Naches State Bank, Naches.....	27 30
St. John State Bank, St. John.....	33 85
Guardian Savings Bank, Seattle.....	33 95
Knettle State Bank, Pomeroy.....	37 80
State Bank of Kent, Kent.....	33 95
Broadway State Bank, Seattle.....	35 05
Oak Harbor State Bank, Oak Harbor.....	27 00
Bank of Commerce, Everett (Coupeville Branch).....	30 25
Outlook State Bank, Outlook.....	26 65
Canadian Bank of Commerce, Seattle.....	200 00
Union Savings & Trust Co., Seattle (Georgetown Branch).....	43 50
Union Savings & Trust Co., Seattle (Ballard Branch).....	48 15
Puyallup State Bank, Puyallup.....	37 15
Union Savings & Trust Co., Seattle.....	225 00
State Bank of Black Diamond, Black Diamond.....	27 90
Pine City State Bank, Pine City.....	28 60
Scandinavian American Bank, Seattle (Ballard Branch).....	57 35
Scandinavian American Bank, Seattle.....	200 00
Duvall State Bank, Duvall.....	27 80
Fidelity Trust Company, Tacoma.....	225 00
Farmers State Bank, Sumner.....	31 35

<i>Received from</i>	<i>Amount.</i>
Oriental American Bank, Seattle.....	\$34 20
Omak State Bank, Omak.....	27 65
Entiat State Bank, Entiat.....	26 80
Japanese Commercial Bank, Seattle.....	45 40
Okanogan State Bank, Riverside.....	28 10
Molson State Bank, Molson.....	30 25
Bank of Stevenson, Stevenson.....	36 90
State Bank of Lyle, Lyle.....	26 85
Pacific State Bank, South Bend.....	49 95
Farmers State Bank, Connell.....	27 20
Wilson Creek State Bank, Wilson Creek.....	29 80
State Bank of Blaine, Blaine.....	28 64
Commercial Bank, Conconully (Okanogan Branch).....	30 90
Okanogan State Bank, Riverside (Loomis Branch).....	27 05
Bridgeport State Bank, Bridgeport.....	29 05
Eltopia State Bank, Eltopia.....	26 60
Union Title & Trust Company, Oroville.....	25 00
Baumeister, Vollmer & Scott Bank, Asotin.....	30 85
Commercial Bank, Conconully (Chesaw Branch).....	26 45
Bank of Asotin County, Asotin.....	30 80
Custer State Bank, Custer.....	26 20
Home State Bank, Blaine.....	81 70
Bank of Bickleton, Bickleton.....	31 45
Farmers & Merchants Bank, Springdale.....	27 85
Bank of Edwall, Edwall.....	31 10
Wheeler State Bank, Wheeler.....	27 15
First State Bank, Deer Park.....	29 15
State Bank of Conway, Conway.....	26 75
First State Bank, Clear Lake.....	27 20
Hamilton State Bank, Hamilton.....	27 15
State Bank of Clarkston, Clarkston.....	27 05
Title Trust Company, Seattle.....	25 00
Seattle Trust Company, Seattle.....	25 00
North Pacific Bank, Tacoma.....	35 55
State Bank of Charleston, Charleston.....	26 95
Orient State Bank, Orient.....	26 45
First Bank of Anatone, Anatone.....	26 60
Bank of Colville, Colville.....	40 95
Bank of Chewelah, Chewelah.....	30 10
Lincoln County State Bank, Davenport.....	37 55
Othello State Bank, Othello.....	28 35
Colville Loan & Trust Co., Colville.....	31 30
Citizens State Bank, Puyallup.....	41 75
San Juan County Bank, Friday Harbor.....	37 85
Ferry County State Bank, Republic.....	33 25
Bank of Colville, Colville (Kettle Falls Branch).....	27 95
Port Angeles Trust & Savings Bank, Port Angeles.....	32 45
Fremont State Bank, Seattle.....	32 40
Washington Trust Company, Spokane.....	89 75
Hunters Exchange Office, Hunters (Branch of Lincoln County State Bank, Davenport)	28 20
State Bank of Goldendale, Goldendale.....	36 35
Glenwood State Bank, Glenwood.....	25 65
Farmers & Mechanics Bank, Spokane.....	36 40
Peoples State Bank, Walla Walla.....	50 40
Bank of Sprague, Sprague.....	46 50
Commercial Bank, Conconully.....	27 00
Farmers State Bank, Winthrop.....	25 50

<i>Received from</i>	<i>Amount.</i>
Columbia State Bank, White Salmon.....	\$33 80
Washington Exchange Bank, Vancouver.....	36 75
Farmers Bank, Krupp.....	29 80
Wahklakum County Bank, Cathlamet.....	30 30
Southwestern Washington Bank, Ilwaco.....	28 45
Montesano State Bank, Montesano.....	49 80
Commercial Bank, Twisp.....	80 35
Miners & Merchants Bank, Chelan.....	82 85
Security State Bank, Chehalis.....	38 15
Bank of Ellensburg, Ellensburg.....	84 90
Farmers State Bank, Hatton.....	27 70
Bank of Pasco, Pasco.....	80 85
State Bank of Connell, Connell.....	81 65
State Bank of Winlock, Winlock.....	29 45
Kelso State Bank, Kelso.....	36 45
First Bank of White Bluffs, White Bluffs.....	27 55
Napavine State Bank, Napavine.....	26 25
Ruff State Bank, Ruff.....	28 80
Clarke County Bank, Washougal.....	29 15
First State Bank, Yacolt.....	27 70
Toledo State Bank, Toledo.....	28 90
Methow Valley Bank, Pateros.....	25 95
Quincy Valley State Bank, Quincy.....	29 90
Green Lake State Bank, Seattle.....	31 70
Willapa Harbor State Bank, Raymond.....	43 10
Commercial Bank & Trust Co., Wenatchee.....	87 55
Leavenworth State Bank, Leavenworth.....	36 90
Kalama State Bank, Kalama.....	28 65
Ferndale State Bank, Ferndale.....	81 00
Nooksack Valley State Bank, Everson.....	28 45
Woodland State Bank, Woodland.....	80 40
Field & Lease, Bankers, Centralia.....	36 80
Roy State Bank, Roy.....	28 75
Tekoa State Bank, Tekoa.....	34 75
First State Bank, Garfield.....	81 40
Issaquah State Bank, Issaquah.....	80 15
Security State Bank, LaCrosse.....	28 40
Farmers & Merchants Bank, Malden.....	30 90
Lumberman's Bank, Hoquiam.....	48 60
Bank of Elma, Elma.....	34 40
Citizens Bank, Renton.....	37 20
Farmers Savings Bank, Walla Walla.....	63 40
Exchange Bank, Waitsburg.....	38 75
Coffman, Dobson & Co., Chehalis.....	81 70
Redmond State Bank, Redmond.....	29 85
Colfax State Bank, Colfax.....	30 15
North Side State Bank, Seattle.....	26 70
State Bank of Seattle, Seattle.....	102 60
Garrison Bros. State Bank, Sumas.....	81 95
Yakima Valley Bank, North Yakima.....	79 15
Northwestern State Bank, Bellingham.....	74 70
Lynden State Bank, Lynden.....	36 80
German American State Bank, Ritzville.....	40 25
Cle Elum State Bank (Roslyn Branch).....	40 30
Farmers & Merchants Bank, Edison.....	27 65
Spokane State Bank, Spokane.....	35 55
Clark Bros. & Klein Trust Co., Spokane.....	25 00
Union Trust & Savings Bank, Spokane.....	104 80

<i>Received from</i>	<i>Amount.</i>
Skagit County Savings Bank & Trust Co., Mt. Vernon....	\$55 10
C. E. Bingham & Co. Bank, Sedro Woolley.....	47 25
Washington Safe Deposit & Trust Company, Spokane.....	25 00
Colville Loan & Trust Co., Colville.....	30 60
Miners & Smelters Bank, Northport.....	30 65
Citizens Bank, Anacortes.....	35 20
Lyman State Bank, Lyman.....	28 00
LaConner State Bank, LaConner.....	32 05
Farmers Bank, Ellensburg.....	51 35
Mortgage Trust & Savings Bank, Seattle.....	55 95
Farmers State Bank, Johnson.....	26 50
Colton State Bank, Colton.....	30 70
Farmers State Bank, Uniontown.....	32 50
Pullman State Bank, Pullman.....	43 90
Alblon State Bank, Albion.....	27 60
King County State Bank, Seattle.....	30 25
Langley State Bank, Langley.....	26 75
First State Bank, LaCrosse.....	34 55
Citizens Bank, Sultan.....	28 50
United States Trust Co., Aberdeen.....	42 90
Wall Walla Safety Deposit & Trust Co., Walla Walla.....	25 00
Kittitas State Bank, Kittitas.....	26 70
Rainier Valley State Bank, Seattle.....	32 95
Pomeroy State Bank, Pomeroy.....	58 85
First Savings & Trust Bank of Whitman County, Colfax....	60 25
Steptoe State Bank, Steptoe.....	26 00
Bank of Starbuck, Starbuck.....	27 70
Farmers State Bank, St. John.....	27 10
First State Bank, Prescott.....	28 85
Bank for Savings, Seattle.....	62 00
Tacoma Savings Bank & Trust Co., Tacoma.....	103 95
Puget Sound State Bank, Tacoma.....	74 60
University State Bank, Seattle.....	54 90
State Bank of East Stanwood, East Stanwood.....	29 20
State Bank of Bellevue, Bellevue.....	26 05
Kirkland State Bank, Kirkland.....	28 50
Security State Bank, Palouse.....	39 30
Bothell State Bank, Bothell.....	28 25
Rucker Bank, Hartford.....	28 20
Traders Bank, Toppenish.....	35 75
Security State Bank, Richland.....	28 10
Marysville State Bank, Marysville.....	33 95
Selah State Bank, Selah.....	27 80
State Bank of Edmonds, Edmonds.....	30 25
State Bank of Enumclaw, Enumclaw.....	34 20
Commercial bank of Snohomish County, Snohomish.....	32 90
Specie Bank, Seattle.....	30 10
Granite Falls State Bank, Granite Falls.....	28 00
Lincoln Trust Company, Spokane.....	25 00
Bank of Commerce, Everett (Pine St. Branch).....	33 15
Prosser State Bank, Prosser.....	36 25
Bank of Latah, Latah.....	28 65
Bank of Stanwood, Stanwood.....	40 45
American Savings Bank & Trust Co., Seattle.....	150 75
State Bank of Buckley, Buckley.....	33 45
Peoples State Bank, Enumclaw.....	33 70
Bank of Commerce, Everett.....	64 45
LaCenter State Bank, LaCenter.....	27 90

<i>Received from</i>	<i>Amount.</i>
Ridgefield State Bank, Ridgefield.....	\$27 70
Bankers Trust Company, Tacoma.....	80 80
First Bank of Wilkeson, Wilkeson.....	33 70
Cle Elum State Bank, Cle Elum.....	51 10
State Bank of North Bend, North Bend.....	28 35
Coulee State Bank, Coulee City.....	34 00
Hartline State Bank, Hartline.....	32 90
Yakima Trust Company, North Yakima.....	78 30
Central Bank & Trust Company, North Yakima.....	55 10
Farmers & Merchants Bank, Cashmere.....	33 40
Citizens State Bank, Prosser.....	34 20
Central Bank, Toppenish.....	81 25
German American Mercantile Bank, Seattle.....	95 55
Northern Bank & Trust Company, Seattle.....	126 95
Grant County Bank, Ephrata.....	32 30
Farmers & Lumbermens Bank, Elma.....	31 40
Citizens Bank, Tenino.....	27 25
Farmers State Bank, Almira.....	32 40
Cashmere State Bank, Cashmere.....	30 90
Columbia Valley Bank, Wenatchee.....	60 60
Aberdeen State Bank, Aberdeen.....	35 45
Scandinavian American Bank, Tacoma.....	156 85
Hayes & Hayes, Bankers, Aberdeen.....	173 15
Douglas County Bank, Waterville.....	47 00
Withrow State Bank, Withrow.....	32 50
Waterville Savings Bank, Waterville.....	37 35
Farmers State Bank, Sprague.....	27 50
Seaboard Bank, Seattle.....	36 60
Citizens State Bank, Auburn.....	29 15
Eatonville State Bank, Eatonville.....	27 80
State Bank of Spangle, Spangle.....	33 55
Bank of Fairfield, Fairfield.....	36 95
Hillyard State Bank, Hillyard.....	42 20
Wall Street Bank, Spokane.....	27 50
Farmers & Merchants Bank, Centralia.....	48 75
Broadway State Bank, Seattle.....	34 80
Castle Rock Bank, Castle Rock.....	33 70
Vashon State Bank, Vashon.....	29 45
Centralia State Bank, Centralia.....	35 85
Citizens Bank, Bremerton.....	35 35
West Seattle State Bank, Seattle.....	28 05
Farmers & Merchants Bank, Rockford.....	34 35
PeEll State Bank, PeEll.....	26 30
Comegys, Hanford & Miller Bank, Thornton.....	33 90
Citizens State Bank, Tekoa.....	38 95
Lamont State Bank, Lamont.....	35 85
Farmers State Bank, Reardan.....	40 80
State Bank of Wilbur, Wilbur.....	53 65
Bank of Clallam County, Port Angeles.....	45 60
State Bank of Sequim, Sequim.....	28 95
Merchants Bank, Port Townsend.....	56 40
Almira State Bank, Almira.....	44 20
Kitsap County Bank, Port Orchard.....	30 55
Citizens Bank of Georgetown, Seattle.....	31 80
Bremerton Trust & Savings Bank, Bremerton.....	32 30
Orting State Bank, Orting.....	29 65
Creston State Bank, Creston.....	35 80
Bank of Rosalia, Rosalia.....	38 60

<i>Received from</i>	<i>Amount.</i>
Puget Sound State Bank, Tacoma.....	\$73 05
Dexter Horton Trust & Savings Bank, Seattle.....	225 00
Elberton State Bank, Elberton.....	29 25
Bank of Endicott, Endicott.....	42 40
The Mabton Bank, Mabton.....	32 45
Bank of Farmington, Farmington.....	36 25
Waverly Exchange Bank, Waverly.....	32 00
Bank of Winona, Winona.....	32 40
Mansfield State Bank, Mansfield.....	35 50
Spokane & Eastern Trust Co., Spokane.....	225 00
Ione State Bank, Ione.....	30 75
Northwest Trust & Safe Deposit Co., Seattle.....	126 75
Oakville State Bank, Oakville.....	27 75
State Bank of Shelton, Shelton.....	42 25
Security State Bank, Newport.....	38 70
Metaline Falls State & Savings Bank, Metaline Falls.....	28 15
Arlington State Bank, Arlington.....	34 30
Everett Trust & Savings Bank, Everett.....	52 05
Citizens State Bank, Arlington.....	37 65
Puyallup State Bank, Puyallup.....	41 00
Bank of Winona, Winona.....	32 25
St. John State Bank, St. John.....	46 30
Pine City State Bank, Pine City.....	31 85
Moxee State Bank, Moxee City.....	27 85
Naches State Bank, Naches.....	28 40
Bank of Commerce, Everett (Coupeville Branch).....	31 20
Outlook State Bank, Outlook.....	27 95
Granite Falls State Bank, Granite Falls.....	28 50
Duvall State Bank, Duvall.....	27 75
Union State Bank, Odessa.....	52 85
Union Bank, Granger.....	29 05
Wilson Creek State Bank, Wilson Creek.....	30 60
Sunnyside Bank, Sunnyside.....	39 25
Grandview State Bank, Grandview.....	34 15
Oak Harbor State Bank, Oak Harbor.....	27 90
Touchet State Bank, Touchet.....	27 60
Farmers & Merchants Bank, Odessa.....	34 10
Knettle State Bank, Pomeroy.....	57 15
Commercial State Bank, Oakesdale.....	50 90
Tolt State Bank, Tolt.....	27 80
State Bank of Kent, Kent.....	37 15
Scandinavian American Bank, Spokane.....	69 95
Bank of Montreal, Spokane.....	107 60
Union Park Bank, Spokane.....	33 40
Harrington State Bank, Harrington.....	41 55
Entiat State Bank, Entiat.....	27 45
Citizens Bank & Trust Co., Everett.....	47 20
Bank of Edwall, Edwall.....	36 20
First State Bank, Deer Park.....	30 70
Farmers & Merchants Bank, Springdale.....	28 75
Omak State Bank, Omak.....	30 30
Bank of Colville, Colville.....	43 60
Farmers State Bank, Centerville.....	29 65
Little Falls State Bank, Vader.....	28 10
Wheeler State Bank, Wheeler.....	28 05
Okanogan State Bank, Riverside.....	30 40
Brooks & Co. Bank, Goldendale.....	35 10
Commercial Bank, Conconully (Chesaw Branch).....	27 40

<i>Received from</i>	<i>Amount.</i>	
Home State Bank, Blaine.....	\$38 65	
Custer State Bank, Custer.....	26 95	
Security State Bank, Spokane.....	36 05	
Okanogan State Bank, Riverside (Loomis Branch).....	28 55	
Bank of Asotin County, Asotin.....	37 10	
Baumeister, Vollmer & Scott Bank, Asotin.....	37 60	
Bridgeport State Bank, Bridgeport.....	32 95	
Molson State Bank, Molson.....	35 05	
Commercial Bank, Conconully.....	27 80	
State Bank of Buckley, Buckley.....	34 35	
Farmers State Bank, Connell.....	30 10	
Farmers State Bank, Sumner.....	82 15	
State Bank of Clarkston, Clarkston.....	28 40	
Warden State Bank, Warden.....	27 80	
Eltopia State Bank, Eltopia.....	28 40	\$16,658 84

Filing Semi-Annual Reports.

<i>Received from</i>	<i>Amount.</i>	
United States Trust Company, Maryhill.....	\$10 00	
Union Trust Company, Seattle.....	10 00	
Seattle Trust Company, Seattle.....	10 00	
Title Trust Company, Seattle.....	10 00	
United States Trust Company, Maryhill.....	10 00	
Clark Bros. & Klein Trust Co., Spokane.....	10 00	
Lincoln Trust Company, Spokane.....	10 00	
Walla Walla Safe Deposit & Trust Company, Walla Walla..	10 00	
Washington Safe Deposit & Trust Co., Spokane.....	10 00	
Union Title & Trust Co., Oroville.....	10 00	
Union Trust Company, Seattle.....	10 00	
Title Trust Company, Seattle.....	10 00	
Seattle Trust Company, Seattle.....	10 00	
Clark Bros. & Klein Trust Co., Spokane.....	10 00	
Lincoln Trust Company, Spokane.....	10 00	
Walla Walla Safety Deposit & Trust Co., Walla Walla.....	10 00	
Washington Safe Deposit & Trust Co., Spokane.....	10 00	
United States Trust Co., Maryhill.....	10 00	
Union Title & Trust Co., Oroville.....	10 00	190 00

Fines Assessed.

<i>Received from</i>	<i>Amount.</i>	
First Bank of Anatone, Anatone.....	\$40 00	
Farmers State Bank, Connell.....	10 00	
Glenwood State Bank, Glenwood.....	20 00	
Pullman State Bank, Pullman.....	10 00	
Waterville Savings Bank, Waterville.....	20 00	
Creston State Bank, Creston.....	10 00	
Citizens State Bank, Auburn.....	10 00	
Woodland State Bank, Woodland.....	10 00	
State Bank of Clarkston, Clarkston.....	10 00	
First State Bank, Garfield.....	10 00	
Bank of Starbuck, Starbuck.....	10 00	160 00

Miscellaneous Collections.

<i>Received from</i>	<i>Amount.</i>	
Sale of annual reports.....	\$0 60	
Filing articles of incorporation (trust companies).....	30 00	
Issuing certificates of authority (trust companies).....	30 00	
Witness fees in Johnson trial at Raymond, Wash.....	27 95	
Witness fees in Pierson trial at South Bend, Wash.....	24 00	112 55
Total receipts for year.....		\$17,116 39

BANKS AUTHORIZED DURING THE YEAR 1916.

NAME OF BANK	Location	Capital Stock
Kalama State Bank.....	Kalama.....	\$15,000 00
Farmers State Bank.....	Winthrop.....	10,000 00
Farmers State Bank.....	Sumner.....	25,000 00
Seaboard Bank	Seattle.....	100,000 00
White Swan Bank.....	White Swan.....	10,000 00
Community State Bank.....	Valleyford.....	10,000 00
American Security Bank.....	Kennewick.....	20,000 00
Commercial State Bank.....	Mansfield.....	25,000 00

TRUST COMPANIES AUTHORIZED DURING THE YEAR 1916.

NAME OF COMPANY	Location	Capital Stock
Lincoln Trust Company.....	Spokane.....	\$100,000 00
Puget Sound Bank & Trust Company.....	Tacoma.....	100,000 00
Guardian Trust & Savings Bank.....	Seattle.....	100,000 00

INCREASE OF CAPITAL STOCK.

NAME OF BANK	Location	Increased From	To
Withrow State Bank.....	Withrow.....	\$15,000 00	\$25,000 00
Hayes & Hayes, Bankers.....	Aberdeen.....	250,000 00	300,000 00
Metropolitan Bank	Seattle.....	100,000 00	200,000 00
Farmers State Bank.....	Almira.....	15,000 00	25,000 00

BANKS REOPENED.

NAME OF BANK	Location	Capital Stock
Bank of Oroville.....	Oroville.....	\$15,000 00

BANKS CONSOLIDATED.

NAME OF BANK	Location	CONSOLIDATED WITH	Date
Guardian Savings Bank.....	Seattle.....	Guardian Trust & Savings Bank	Mar. 29
State Bank of Sumner.....	Sumner.....	Farmers State Bank.....	Apr. 10
State Bank of Blaine.....	Blaine.....	Home State Bank.....	Apr. 28
Gillett State Bank.....	White Salmon	First National Bank.....	May 20
		(Name changed to Columbia State Bank)	
Mortgage Trust & Savings Bank	Seattle.....	Northwest Trust & Safe Deposit Company	June 29
United States Trust Company.	Aberdeen.....	Hayes & Hayes, Bankers.....	July 27
Puget Sound State Bank.....	Tacoma.....	Puget Sound Bank & Trust Company	Oct. 25
Glenwood State Bank.....	Glenwood.....	Columbia State Bank, White Salmon	Nov. 16

BANKS FAILED.

NAME OF BANK	Location	Date Closed
Cowlitz County Bank.....	Kalama.....	Jan. 4th

**TRUST FUNDS AS REPORTED BY THE TRUST COMPANIES AND
THE BANKS DOING A TRUST COMPANY BUSINESS, AT
CLOSE OF BUSINESS NOVEMBER 17, 1916.**

Securities held in trust.....	\$8,973,365 03
Real estate held in trust.....	16,183,834 69
Trust funds	274,740 27
	\$25,431,439 99
Trusts accepted	\$25,431,439 99

**TOTAL RESOURCES AND LIABILITIES OF 77 NATIONAL BANKS
IN THE STATE OF WASHINGTON, AT CLOSE OF
BUSINESS ON NOVEMBER 17, 1916.**

RESOURCES.

Loans and discounts.....	\$82,152,000 00
Overdrafts	77,000 00
U. S. bonds.....	7,520,000 00
Other bonds, securities, etc. (other than stocks).....	20,413,000 00
Stocks, including premium on same.....	660,000 00
Stock of Federal Reserve Bank.....	478,000 00
Banking house	2,407,000 00
Furniture and fixtures.....	618,000 00
Other real estate owned.....	1,303,000 00
Due from approved reserve agents.....	16,837,000 00
Due from banks and bankers (other than above).....	15,232,000 00
Exchanges for clearing house.....	1,801,000 00
Other checks on banks in the same place.....	192,000 00
Outside checks and other cash items.....	376,000 00
Notes of other national banks.....	429,000 00
Federal Reserve Bank notes.....	1,000 00
Federal reserve notes.....	111,000 00
Lawful reserve in vault, and with Federal Reserve Bank.....	12,979,000 00
Redemption fund and due from U. S. Treasurer.....	332,000 00
Customers' liability under letters of credit actually paid.....	565,000 00
Customers' liability account of "Acceptances".....	26,000 00
Other assets, if any.....	2,000 00
Total resources	\$164,511,000 00

LIABILITIES.

Capital stock paid in.....	\$11,560,000 00
Surplus fund	4,574,000 00
Undivided profits, less expenses and taxes paid.....	1,921,000 00
Amount reserved for taxes accrued.....	155,000 00
Amount reserved for all interest accrued.....	102,000 00
Circulation outstanding	6,547,000 00
Due to banks and bankers, other than Federal Reserve Bank and approved reserve agents.....	24,665,000 00
Dividends unpaid	4,000 00
Demand deposits	76,003,000 00
Time deposits	37,848,000 00
Bonds borrowed	2,000 00
Securities borrowed	77,000 00
Bills payable, other than with Federal Reserve Bank.....	225,000 00
Cash letters of credit.....	602,000 00
Acceptances, based on imports and exports.....	26,000 00
Liabilities other than those above stated.....	200,000 00
Total liabilities	\$164,511,000 00

COMPARATIVE ABSTRACT OF REPORTS OF CONDITION OF STATE BANKS IN WASHINGTON AT THE CLOSE OF BUSINESS ON THE DATES NAMED.

	March 7, 1916, 276 State Banks	May 1, 1916, 276 State Banks	June 30, 1916, 276 State Banks, 9 Trust Com- panies	Sept. 15, 1916, 275 State Banks	Nov. 17, 1916, 276 State Banks, 9 Trust Com- panies
RESOURCES:					
Loans on real estate.....	\$72,433,155 12	\$12,000,451 47	\$12,205,949 48	\$12,271,397 51	\$14,107,624 06
Other loans and discounts.....	88,511,912 00	61,459,647 17	68,717,008 50	62,912,407 23	70,806,076 09
.....	189,618 61	241,659 56	256,152 95	239,961 23	312,745 05
.....	14,528,002 19	14,301,585 25	16,657,276 29	17,004,230 09	17,780,614 25
.....	966,970 96	981,309 42	1,508,302 67	1,232,350 24	3,250,464 80
.....	5,377,851 87	8,308,785 53	5,571,714 08	5,595,365 80	5,615,293 26
.....	1,015,761 97	1,024,002 80	1,055,169 78	1,067,163 50	1,099,673 72
.....	3,218,270 34	3,316,309 45	4,073,718 08	3,517,189 43	4,209,708 91
.....	21,860,469 20	22,589,073 55	19,847,630 94	22,882,343 98	22,184,443 14
Due from banks.....	455,949 25	398,564 24	414,209 24	425,941 25	549,399 80
Checks and cash items.....	601,202 88	1,105,008 80	748,238 83	908,733 11	989,850 08
Exchanges for clearing houses.....	6,038,710 00	6,441,111 78	6,709,198 70	6,882,219 56	6,886,153 22
Expenses.....	667,886 04	1,212,869 78	1,166,270 99	1,339,636 98	1,802,490 24
Letters of Credit.....	.....	.....	32,710 00	38,610 00	86,792 17
Other resources.....	11,119 84	15,467 43	12,134 29	5,757 43	48,742 51
Acceptances.....	.....	.....	250,000 00	370,000 00	200,000 00
Totals.....	\$136,297,122 00	\$131,406,889 47	\$136,230,736 73	\$138,573,536 22	\$159,006,449 87
LIABILITIES:					
Capital stock.....	\$13,932,700 00	\$14,007,700 00	\$15,786,700 00	\$14,027,700 00	\$15,847,700 00
Surplus.....	3,009,836 90	3,105,877 29	4,476,942 08	3,121,754 50	4,447,100 89
Undivided profits.....	2,187,897 50	2,898,935 17	2,671,032 96	3,125,426 46	4,424,645 44
Dividends unpaid.....	17,802 00	10,202 51	52,880 00	8,182 50	4,316 59
Due to banks.....	6,888,524 28	6,745,735 08	5,644,505 94	7,702,265 41	11,545,355 60
City, county and state deposits.....	1,962,001 42	3,376,001 96	3,402,000 28	3,141,001 43	2,704,000 26
Postal savings deposits.....	617,651 00	583,888 96	894,513 70	625,310 52	668,805 10
Deposits subject to check.....	48,271,427 00	46,007,997 33	45,212,467 01	49,929,236 69	58,302,532 41
Demand certificates.....	2,029,166 74	1,924,651 36	1,824,078 72	2,083,707 01	2,085,477 82
Cashier's checks.....	680,916 79	705,526 49	649,311 78	722,038 99	924,662 25
Time certificates.....	9,951,443 23	9,924,067 19	10,109,301 73	10,248,702 96	11,511,903 49
Savings deposits.....	40,055,404 93	40,078,880 52	41,878,888 83	41,720,823 60	44,861,146 88
Certified checks.....	192,437 46	359,978 73	259,947 87	176,009 24	219,022 14
Trust funds.....	40,457 97	408,017 73	343,780 11	200,807 01	437,800 94
Letters of credit.....	1,580 00	14,259 73	15,545 08	49,697 21	92,179 03
Re-discounts.....	445,235 91	171,562 75	790,399 22	167,813 51	87,707 45
Bills payable.....	846,036 39	902,467 25	1,425,122 54	842,700 20	686,679 78
Other liabilities.....	55,067 14	101,156 09	52,009 22	53,902 70	56,702 70
Acceptances.....	.....	.....	250,000 00	370,000 00	200,000 00
Totals.....	\$136,297,122 00	\$131,406,889 47	\$136,230,736 73	\$138,573,536 22	\$159,006,449 87

DIRECTORY OF STATE BANKS AND TRUST COMPANIES REPORTING NOVEMBER 17, 1916.

Town	County	NAME OF BANK	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Deposits	Cash and Due from Banks
Aberdeen.....	Grays Harbor	Aberdeen State Bank.....	1907	G. L. Nyere.....	G. W. Ripley.....	\$25,000	* \$2,470	\$223,173	\$97,914
Aberdeen.....	Grays Harbor	Hayes & Hayes, Bankers.....	1904	F. B. Patterson.....	W. J. Patterson.....	300,000	70,785	2,730,555	565,477
Albion.....	Whitman.....	Albion State Bank.....	1906	W. E. Lawson.....	J. E. Miller.....	25,000	13,174	67,763	55,980
Almira.....	Lincoln.....	Almira State Bank.....	1902	Jens Peterson.....	Julius O. Johnson...	25,000	37,155	479,268	237,178
Almira.....	Lincoln.....	Farmers State Bank.....	1914	Fred H. Hyde.....	C. E. Alison.....	25,000	3,197	233,030	34,910
Anacortes.....	Skagit.....	Bank of Commerce.....	1906	Daniel Kelleher.....	Fred D. Cartwright	25,000	1,105	223,344	50,330
Anacortes.....	Skagit.....	Citizens State Bank.....	1907	M. B. Mattice.....	W. J. Mattice.....	25,000	2,886	250,732	68,401
Anatone.....	Asotin.....	First Bank of Anatone.....	1907	Elf Bolick.....	John K. McIntosh..	10,000	568	79,453	63,793
Arlington.....	Snohomish.....	Arlington State Bank.....	1900	O. E. Bingham.....	O. H. Tracy.....	25,000	10,859	130,041	90,563
Arlington.....	Snohomish.....	Citizens State Bank.....	1907	J. B. Riley.....	L. O. Palmer.....	15,000	18,815	250,699	73,567
Asotin.....	Asotin.....	Bank of Asotin County.....	1904	Ben Ayers.....	J. B. Jones.....	25,000	9,276	237,294	197,139
Asotin.....	Asotin.....	Baumelster, Vollmer & Scott Bank....	1914	E. Baumelster.....	E. Matthes.....	15,000	5,819	260,777	221,063
Auburn.....	King.....	Citizens State Bank.....	1914	A. O. MacCallum....	Ward M. Carter....	50,000	918	37,023	35,926
Ballard.....	King.....	Scandinavian American Bank..... (Branch of Scandinavian American Bank, Seattle.)	.....	.....	W. V. Rinehart, Mgr.	.....	.....	.....	.....
Ballard.....	King.....	Union Savings & Trust Company..... (Branch of Union Savings & Trust Company, Seattle.)	.....	.....	O. W. Casler, Mgr.	.....	.....	.....	.....
Battleground..	Clarke.....	State Bank of Battleground.....	1914	Fred Ellis.....	H. C. Cornell.....	10,000	298	36,179	19,534

* Expense.

Directory of State Banks and Trust Companies Reporting November 17, 1916.—Continued.

Town	County	NAME OF BANK	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Deposits	Cash and Due from Banks
Bellevue.....	King.....	State Bank of Bellevue.....	1914	W. L. Collier.....	D. E. Bigelow.....	\$10,000	\$1,047	\$22,808	\$8,587
Bellingham....	Whatcom.....	Northwestern State Bank.....	1906	I. J. Adair.....	B. T. Drake.....	100,000	51,641	1,142,476	519,164
Bickleton.....	Klickitat.....	Bickleton State Bank.....	1906	Charles E. Flower...	S. A. Rossler.....	25,000	13,726	262,344	186,207
Black Diamond	King.....	State Bank of Black Diamond.....	1914	P. L. Bingay.....	John M. Lee.....	12,000	716	70,639	12,496
Blaine.....	Whatcom.....	Home State Bank.....	1908	G. A. Willson.....	O. K. Middleton....	25,000	10,489	270,589	82,319
Bothell.....	King.....	Bothell State Bank.....	1908	G. C. Hubbell.....	G. C. Hubbell.....	12,500	1,463	66,712	12,352
Bremerton.....	Kitsap.....	Bremerton Trust & Savings Bank.....	1914	Geo. E. Miller.....	.....	25,000	* 1,306	149,956	26,544
Bremerton.....	Kitsap.....	Citizens Bank	1909	S. Migliavacca.....	Ernest C. Ebert....	50,000	7,919	206,694	80,983
Bridgeport.....	Douglas.....	Bridgeport State Bank.....	1908	Herman Cornehl....	T. J. East.....	15,000	8,557	143,074	74,090
Buckley.....	Pierce.....	State Bank of Buckley.....	1917	O. O. Steberg.....	A. O. Johnson.....	25,000	2,827	186,262	45,416
Cashmere.....	Chelan.....	Cashmere State Bank.....	1917	Guy O. Browne.....	E. F. Stowell.....	25,000	7,520	146,221	31,224
Cashmere.....	Chelan.....	Farmers & Merchants Bank.....	1906	John C. Lilly.....	C. D. Halferty, Jr..	25,000	6,985	249,364	77,501
Castle Rock....	Cowlitz.....	The Castle Rock Bank.....	1904	J. A. Byerly.....	G. L. Buland.....	25,000	28,773	171,610	41,225
Cathlamet....	Wahklakum..	Wahklakum County Bank.....	1909	Will T. Wright.....	Th. Fagstad	10,000	4,004	84,125	19,246
Centerville....	Klickitat.....	Farmers State Bank.....	1914	L. T. Gillett.....	J. O. Kaldera.....	15,000	867	97,600	36,380
Centralla.....	Lewis.....	Centralla State Bank.....	1915	W. J. Patterson....	M. W. Daubney, Assistant Cashier.	100,000	9,916	216,546	49,041
Centralla.....	Lewis.....	Farmers & Merchants Bank.....	1911	B. H. Rhodes.....	C. Paul Uhlmann...	75,000	12,078	515,861	185,908

* Expense.

Directory of State Banks and Trust Companies Reporting November 17, 1916.—Continued.

Town	County	NAME OF BANK	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Deposits	Cash and Due from Banks
Centralla.....	Lewis.....	Field & Lease, Bankers.....	1903	John A. Field.....	J. E. Lease.....	\$25,000	\$2,633	\$230,087	\$99,711
Charleston.....	Kitsap.....	State Bank of Charleston.....	1914	F. J. Carver.....	A. E. Galbraith.....	15,000	1,178	32,412	2,373
Ohehalis.....	Lewis.....	Coffman, Dobson & Co., Bankers.....	1904	N. B. Coffman.....	D. T. Coffman.....	50,000	126,285	1,195,599	335,739
Ohehalis.....	Lewis.....	Security State Bank.....	1903	J. W. Alexander.....	W. J. Ford.....	25,000	23,192	285,400	69,994
Ohehan.....	Ohehan.....	Miners & Merchants Bank.....	1907	J. A. VanSlyke.....	H. W. VanSlyke.....	25,000	23,694	233,730	85,247
Ohehaw.....	Okanogan.....	Commercial Bank (Branch of Commercial Bank of Con- conully.)	.....	.....	J. B. Jones, Mgr.....	.....	.....	.....	.....
Ohewelah.....	Stevens.....	Bank of Chewelah.....	1911	Thomas Bowers.....	Charles Adams	15,000	1,225	121,409	21,273
Clarkston.....	Asotin.....	State Bank of Clarkston.....	1907	A. E. Clarke.....	Henry Elliott, Acting Cashier.	15,000	2,164	53,115	16,553
Olear Lake.....	Skagit.....	First State Bank.....	1914	C. E. Bingham.....	Q. R. Bingham.....	10,000	1,674	54,434	22,597
Ole Elum.....	Kittitas.....	Ole Elum State Bank.....	1904	Frank Carpenter....	L. R. Nelson.....	50,000	16,792	593,649	264,343
Oolfax.....	Whitman.....	Oolfax State Bank.....	1903	J. K. McCormack....	R. F. Bigelow.....	60,000	11,256	133,021	65,554
Oolfax.....	Whitman.....	First Savings & Trust Bank of Whit- man County.	1906	Alfred Coolidge.....	H. G. DePledge.....	50,000	25,020	337,071	108,756
Colton.....	Whitman.....	Colton State Bank.....	1903	M. Schultheis, Jr....	A. B. Sulder.....	15,000	4,591	262,324	100,466
Colville.....	Stevens.....	Bank of Colville.....	1900	G. W. Peddycord....	C. L. Baker.....	100,000	22,776	430,574	90,271
Colville.....	Stevens.....	Colville Loan & Trust Company.....	1909	C. H. Carroll.....	Geo. W. Seal, Sec'y	25,000	1,616	133,236	29,296
Conconully....	Okanogan....	Commercial Bank	1890	N. E. Whitworth....	F. J. May.....	40,000	13,232	213,058	55,729
Concrete.....	Skagit.....	State Bank of Concrete.....	1914	J. O. Wilson.....	Frank D. LaBold....	10,000	2,980	80,178	26,833

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Town	County	NAME OF BANK	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Deposits	Cash and Due from Banks
Connell.....	Franklin.....	Farmers State Bank.....	1915	C. W. Nelson.....	J. B. Helmick.....	\$10,000	\$1,643	\$112,897	\$57,378
Connell.....	Franklin.....	State Bank of Connell.....	1907	John H. Schlomer...	W. H. Miller.....	15,000	6,405	248,088	77,739
Conway.....	Skagit.....	State Bank of Conway.....	1915	John S. Finstad.....	A. Garborg	10,000	1,760	65,381	24,808
Coulee City....	Grant.....	Coulee State Bank.....	1905	James Howell.....	J. B. Peterson.....	25,000	18,989	290,869	71,731
Coupeville....	Island.....	Bank of Commerce..... (Branch of Bank of Commerce, Everett.)	.....	.....	A. C. Fox, Asst. Cashier.	.....	.....	.....	.....
Oreston.....	Lincoln.....	Oreston State Bank.....	1902	J. M. Dungan.....	Geo. L. Duncan.....	25,000	11,277	230,209	107,908
Ouster.....	Whatcom.....	Ouster State Bank.....	1914	C. R. Behme.....	A. F. Stone.....	10,000	891	42,277	16,889
Davenport....	Lincoln.....	Lincoln County State Bank.....	1901	J. W. Fry.....	Fred S. Wells.....	50,000	12,254	560,303	101,055
Deer Park.....	Spokane.....	First State Bank.....	1907	O. F. Kelly.....	Evan Berg	25,000	2,055	105,137	25,606
Duvall.....	King.....	Duvall State Bank.....	1912	A. H. Boyd.....	C. Beadon Hall.....	15,000	3,629	55,018	12,007
East Stanwood	Snobomish....	State Bank of East Stanwood.....	1910	A. Garborg.....	C. R. Amundsen....	15,000	6,020	113,024	39,337
Eatonville....	Pierce.....	Eatonville State Bank.....	1913	F. M. Roberts.....	Norman J. Bruen...	10,000	988	66,595	10,485
Edison.....	Skagit.....	Farmers & Merchants Bank.....	1908	N. B. Hannay.....	J. K. Hannay.....	12,000	5,337	85,822	34,688
Edmonds.....	Snobomish....	State Bank of Edmonds.....	1907	L. W. Lewis.....	.....	25,000	4,672	101,220	24,801
Edwall.....	Lincoln.....	Bank of Edwall.....	1902	John F. Green.....	Ward Jesseph	25,000	6,579	256,137	121,404
Elberton.....	Whitman.....	Elberton State Bank.....	1909	J. F. Long.....	R. B. Walker.....	10,000	1,720	75,161	28,681
Ellensburg....	Kittitas.....	Bank of Ellensburg.....	1901	E. H. Snowden.....	S. S. Nesbit.....	50,000	7,188	263,292	130,046
Ellensburg....	Kittitas.....	Farmers Bank	1905	James Ramsay.....	J. O. Sterling.....	50,000	54,173	663,103	286,983

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Town	County	NAME OF BANK	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Deposits	Cash and Due from Banks
Elma.....	Grays Harbor	Bank of Elma.....	1907	A. D. Devonshire....	E. L. France.....	\$15,000	\$12,939	\$208,361	\$59,802
Elma.....	Grays Harbor	Farmers' & Lumbermen's Bank.....	1910	Henry McOleary....	W. L. Boomer.....	20,000	7,507	151,231	48,850
Eltopia.....	Franklin.....	Eltopia State Bank.....	1913	Felix VanHollenbeck	W. C. Bannerman..	10,000	3,953	88,350	31,654
Endicott.....	Whitman.....	Bank of Endicott.....	1903	M. A. Sherman.....	M. A. Sherman, Jr.	25,000	9,547	331,907	199,474
Entiat.....	Chelan.....	Entiat State Bank.....	1914	Harmon Wilcox....	J. G. Kennedy.....	10,000	* 474	36,498	9,241
Enumclaw.....	King.....	Peoples State Bank.....	1910	B. R. Kibler.....	B. R. Kibler.....	25,000	9,984	175,607	41,055
Enumclaw.....	King.....	State Bank of Enumclaw.....	1904	S. Lafrombise.....	A. O. Johansen....	30,000	8,117	202,015	50,015
Ephrata.....	Grant.....	Grant County Bank.....	1912	E. C. Davis.....	J. T. Wilkins.....	10,000	2,508	162,377	13,713
Everett.....	Snohomish....	Bank of Commerce.....	1900	Daniel Kelleher....	E. O. Olson.....	100,000	25,858	1,077,880	385,237
Everett.....	Snohomish....	Bank of Commerce (Pine St. Branch).	.....	.....	D. W. Dykeman, Assistant Cashier.	.....	.....	.....	.....
Everett.....	Snohomish....	Citizens Bank & Trust Company.....	1912	N. L. Thompson....	J. L. Lyen.....	100,000	23,016	472,539	133,882
Everett.....	Snohomish....	Everett Trust & Savings Bank.....	1902	Wm. C. Butler.....	.....	25,000	38,825	540,595	113,549
Everson.....	Whatcom.....	Nooksack Valley State Bank.....	1906	B. Bollerud.....	Henry P. Johnson..	15,000	1,913	94,651	40,409
Fairfield.....	Spokane.....	Bank of Fairfield.....	1908	Henry Treede.....	O. E. Moss.....	12,000	6,765	283,759	146,402
Farmington...	Whitman.....	Bank of Farmington.....	1887	Alfred Coolidge....	W. Olaud Ranfrew..	25,000	18,431	225,594	55,367
Ferndale.....	Whatcom.....	Ferndale State Bank.....	1904	H. E. Campbell....	Percy Hood	15,000	8,857	157,231	51,012
Friday Harbor	San Juan.....	San Juan County Bank.....	1893	Gene O. Gould.....	Van E. Sargent....	35,000	20,016	313,161	102,678

* Expense.

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Town	County	NAME OF BANK	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Deposits	Cash and Due from Banks
Garfield.....	Whitman.....	First State Bank.....	1902	R. A. Johnson.....	L. M. McCarthy.....	\$50,000	\$14,508	\$383,023	\$39,668
Goldendale.....	Klickitat.....	Brooks & Co. Bank.....	1914	N. B. Brooks.....	A. E. Coley.....	25,000	5,616	175,489	70,233
Goldendale.....	Klickitat.....	Goldendale State Bank.....	1904	L. T. Gillett.....	O. E. Crooks.....	25,000	45,091	301,709	106,245
Grandview.....	Yakima.....	Grandview State Bank.....	1910	E. O. Keck.....	A. W. Hawn.....	10,000	5,498	179,491	69,936
Granger.....	Yakima.....	Union Bank	1905	H. O. Davis.....	A. O. Snowden.....	10,000	5,667	80,766	27,948
Granite Falls..	Snohomish....	Granite Falls State Bank.....	1907	B. E. Chappell.....	O. F. Stage.....	13,000	656	70,661	12,923
Hamilton.....	Skagit.....	Hamilton State Bank.....	1914	J. H. Smith.....	H. S. Crothers.....	10,000	645	45,682	25,166
Harrington....	Lincoln.....	Harrington State Bank.....	1904	John E. Russell.....	H. O. Jones.....	30,000	10,327	351,547	187,840
Hartline.....	Grant.....	Hartline State Bank.....	1903	H. B. Jones.....	May S. Jones.....	25,000	17,154	196,862	89,133
Hatton.....	Adams.....	Farmers State Bank.....	1907	W. H. Miller.....	L. O. Crossland....	10,000	6,541	118,582	28,095
Hillyard.....	Spokane.....	Hillyard State Bank.....	1905	W. W. Cooper.....	H. C. Howe.....	25,000	25,267	343,609	122,508
Hoquiam.....	Grays Harbor	Lumberman's Bank	1904	W. E. Ferrebee.....	R. E. Dawdy.....	100,000	22,253	479,644	81,576
Hunters.....	Stevens.....	Hunters Exchange Office..... (Branch of Lincoln County State Bank, Davenport.)	.....	.....	G. H. Inkster, Mgr..	.....	.....	.....	.....
Ilwaco.....	Pacific.....	Southwestern Washington Bank.....	1911	H. Freeborough.....	P. L. Sinclair.....	10,000	75	109,016	22,166
Ione.....	Pend Oreille..	Ione State Bank.....	1909	C. N. Buffman.....	E. Thompson	10,000	1,484	111,055	82,082
Issaquah.....	King.....	Issaquah State Bank.....	1913	Herman C. Schultz..	A. J. Peters.....	25,000	2,862	120,109	30,541
Johnson.....	Whitman.....	Farmers State Bank.....	1907	A. O. White.....	Frank Willoughby..	10,000	106	81,490	43,768

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Town	County	NAME OF BANK	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Deposits	Cash and Due from Banks
Kalama.....	Cowlitz.....	Kalama State Bank.....	1916	O. C. Buckles.....	G. N. Campbell.....	\$15,000	* \$196	\$73,896	\$29,641
Kelso.....	Cowlitz.....	Kelso State Bank.....	1893	F. M. Carothers.....	F. L. Stewart.....	25,000	23,387	244,533	71,025
Kennewick.....	Benton.....	American Security Bank.....	1916	M. O. Klitten.....	Caroline Klitten ...	20,000	2,510	10,757	17,882
Kennewick.....	Benton.....	Bank of Kennewick.....	1906	Emery Olmstead....	M. W. Mattechek...	25,000	* 11,729	58,099	372
Kent.....	King.....	State Bank of Kent.....	1906	W. H. Overlock.....	Chas. R. Otey.....	40,000	11,199	241,896	78,186
Kettle Falls....	Stevens.....	Bank of Colville.....	.....	.....	J. M. Williams, Manager.	.....	.....	.....	.....
Kirkland.....	King.....	(Branch of Bank of Colville, Colville.) Kirkland State Bank.....	1911	Herman C. Schultz..	Glenn M. Johnson..	10,000	1,138	75,808	22,961
Kittitas.....	Kittitas.....	Kittitas State Bank.....	1911	Geo. W. Snodgrass..	H. W. Higman.....	10,000	1,585	62,575	20,983
Krupp.....	Grant.....	Farmers Bank	1907	M. A. Wiley.....	B. F. Paff.....	10,000	5,981	122,073	17,281
LaCenter.....	Clarke.....	LaCenter State Bank.....	1911	W. A. Mansfield....	C. A. Button.....	10,000	5,048	62,080	25,113
LaConner.....	Skagit.....	LaConner State Bank.....	1912	N. B. Hannay.....	W. S. Packard.....	25,000	14,670	221,538	128,410
LaCrosse.....	Whitman.....	First State Bank.....	1911	P. B. Stravens.....	Ira M. Camp.....	60,000	23,788	458,248	65,387
LaCrosse.....	Whitman.....	Security State Bank.....	1914	F. L. Gordon.....	J. E. Moore.....	15,000	3,774	138,490	41,204
Lake Stevens..	Snohomish....	The Rucker Bank.....	1914	B. J. Rucker.....	A. D. Campbell.....	10,000	1,788	65,104	39,515
Lamont.....	Whitman.....	Lamont State Bank.....	1908	E. A. Shields.....	B. J. Ellis.....	10,000	8,714	283,760	86,001
Langley.....	Island.....	Langley State Bank.....	1913	H. P. Jensen.....	James O. Langley..	10,000	250	36,449	* 4,186
Latah.....	Spokane.....	Bank of Latah.....	1907	Wm. A. McEachern.	A. L. Faler.....	15,000	4,041	171,935	80,828

* Expense.

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Leavenworth..	Chelan.....	Leavenworth State Bank.....	1910	F. A. Sinclair.....	Robt. B. Field.....	\$25,000	\$7,382	\$281,521	\$43,058
Loomis.....	Okanogan....	Okanogan State Bank..... (Branch of Okanogan State Bank, Riverside.)			Arthur Lund				
Lyle.....	Klickitat.....	State Bank of Lyle.....	1911	O. F. Hendricksen...	L. H. Lawson.....	12,500	1,680	45,937	11,075
Lyman.....	Skagit.....	Lyman State Bank.....	1912	G. A. Minkler.....	F. C. Fellows.....	10,000	3,187	61,609	10,645
Lynden.....	Whatecom....	Lynden State Bank.....	1907	P. M. Serrurier.....	W. B. VanderGriffend	25,000	18,986	288,125	75,682
Mabton.....	Yakima.....	The Mabton Bank.....	1904	A. T. Carlson.....	Earle Larrison	25,000	4,647	183,895	74,382
Malden.....	Whitman.....	Farmers & Merchants Bank.....	1908	L. F. Rohleder.....	R. E. Gullick.....	20,000	* 4,764	173,916	38,025
Mansfield.....	Douglas.....	Commercial State Bank.....	1916	Frank W. Olwell....	E. A. Carroll.....	25,000	1,254	48,150	62,963
Mansfield.....	Douglas.....	Mansfield State Bank.....	1909	A. L. Rogert.....	L. H. Meritt.....	25,000	27,736	333,123	146,302
Marysville.....	Snohomish....	Marysville State Bank.....	1893	S. T. Smith.....	E. E. Colvin.....	25,000	6,345	183,217	81,940
Metalline Falls.	Pend Oreille..	Metalline Falls State & Savings Bank.	1911	H. E. Neeland.....	A. W. Dressel.....	10,000	689	58,283	20,602
Molson.....	Okanogan....	Molson State Bank.....	1908	C. S. Barnes.....	G. B. Avery.....	15,000	7,140	168,907	43,768
Montesano.....	Grays Harbor	Montesano State Bank.....	1897	A. D. Devonshire....	W. H. France.....	50,000	61,080	553,741	141,365
Morton.....	Lewis.....	State Bank of Morton.....	1911	F. M. Broadbent....	W. W. Morse.....	11,000	* 301	50,212	17,489
Mount Vernon..	Skagit.....	Skagit County Savings Bank & Trust Company.	1911	Geo. D. McLean.....	Frank C. Pickering	25,000	8,625	115,614	20,988
Moxee City....	Yakima.....	Moxee State Bank.....	1914	L. H. Desmarais....	J. E. McGrath.....	10,000	1,071	52,737	15,022

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Naches.....	Yakima.....	Naches State Bank.....	1910	W. Goodsell.....	J. R. Reynolds.....	\$10,000	\$4,134	\$67,297	\$29,032
Napavine.....	Lewis.....	Napavine State Bank.....	1913	James P. Weter.....	L. A. Dally.....	10,000	330	42,667	14,620
Newport.....	Pend Oreille...	Security State Bank.....	1908	J. T. Phillips.....	E. A. Anderson.....	35,000	10,115	279,510	51,957
North Bend....	King.....	State Bank of North Bend.....	1913	Wm. H. Taylor.....	Loy E. Oarlin.....	20,000	984	103,107	48,354
Northport.....	Stevens.....	Miners & Smelters Bank.....	1915	J. J. Day.....	J. B. Helpman.....	10,000	1,004	161,626	61,727
North Yakima.	Yakima.....	Central Bank & Trust Company.....	1910	D. L. Buren.....	W. F. Gritchell.....	50,000	3,323	145,524	38,637
North Yakima.	Yakima.....	Yakima Trust Company.....	1908	H. C. Lucas.....	E. P. Hoffman.....	100,000	22,880	643,217	277,891
North Yakima.	Yakima.....	Yakima Valley Bank.....	1902	O. A. Fechter.....	Chas. Heath	100,000	20,361	894,577	417,183
Oakesdale.....	Whitman.....	Commercial State Bank.....	1891	E. H. Hanford.....	H. W. Hanford.....	25,000	12,231	517,680	144,712
Oak Harbor...	Island.....	Oak Harbor State Bank.....	1909	Robt. Moody.....	J. M. Pratt.....	15,000	4,551	56,600	14,455
Oakville.....	Grays Harbor	Oakville State Bank.....	1909	Wm. T. Perkins.....	O. C. Scates.....	10,000	892	54,061	18,041
Odessa.....	Lincoln.....	Farmers & Merchants Bank.....	1915	L. G. Muelser.....	Hy W. Rieke.....	25,000	2,669	181,445	57,591
Odessa.....	Lincoln.....	Union State Bank.....	1911	G. W. Finney.....	C. T. Deets.....	40,000	29,841	587,608	123,905
Okanogan.....	Okanogan....	Commercial Bank .....	.....	.....	O. C. Richardson, Assistant Cashier.	.....	.....	.....	.....
Omak.....	Okanogan....	Omak State Bank.....	1907	J. H. Stidey.....	John Scott	15,000	2,740	113,207	33,728
Orient.....	Ferry.....	Orient State Bank.....	1910	Geo. P. Akerly.....	E. A. Akerly.....	10,000	257	86,381	9,733
Oroville.....	Okanogan....	Union Title & Trust Company.....	1910	S. O. Mitchell.....	P. M. Snider, Sec'y.	40,000	5,528	10,843

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Orting.....	Pierce.....	Orting State Bank.....	1913	W. J. Thompson....	M. E. Callendar....	\$10,000	\$336	\$91,054	\$34,418
Othello.....	Adams.....	Othello State Bank.....	1907	Wm. Snyder.....	J. P. Stiemens.....	10,000	5,011	92,234	51,176
Outlook.....	Yakima.....	Outlook State Bank.....	1908	W. H. Norman.....	H. E. Schroeder....	10,000	1,243	58,436	22,968
Palouse.....	Whitman....	Security State Bank.....	1899	J. K. McCornack....	John P. Duke.....	60,000	19,046	498,517	146,225
Pasco.....	Franklin....	Bank of Pasco.....	1908	J. B. Crain.....	E. W. Landt.....	50,000	6,665	187,123	41,459
Pateros.....	Okanogan...	Methow Valley Bank.....	1911	Chas. T. Borg.....	O. A. Johnson.....	10,000	212	34,230	23,925
Pe Ell.....	Lewis.....	Pe Ell State Bank.....	1914	E. H. Lester.....	O. W. Boynton.....	10,000	436	28,517	16,762
Pine City.....	Whitman....	Pine City State Bank.....	1914	A. J. Stone.....	W. O. Palmer.....	15,000	2,553	138,286	27,868
Pomeroy.....	Garfield....	Knettles State Bank.....	1914	N. D. Knettles.....	L. N. Knettles.....	50,000	20,156	653,088	587,841
Pomeroy.....	Garfield....	Pomeroy State Bank.....	1897	R. L. Rush.....	W. B. Morris.....	50,000	91,189	1,567,074	632,516
Port Angeles...	Clallam.....	Bank of Clallam County.....	1895	H. E. Lutz.....	S. J. Lutz.....	25,000	9,596	457,253	170,383
Port Angeles...	Clallam.....	Port Angeles Trust & Savings Bank..	1914	E. J. Walton.....	Benj. N. Phillips....	25,000	188	154,977	29,681
Port Orchard..	Kitsap.....	Kitsap County Bank.....	1908	Thomas Ross.....	W. W. Boner.....	20,000	5,560	113,586	19,215
Port Townsend	Jefferson....	Merchants Bank	1889	W. M. Ladd.....	N. C. Strong.....	75,000	27,530	647,666	214,545
Poulsbo.....	Kitsap.....	Liberty Bay Bank.....	1909	Wm. Thaanum.....	L. T. Wirstad, Acting Cashier.	10,000	6,984	145,207	29,389
Prescott.....	Walla Walla..	First State Bank.....	1904	H. S. Fender.....	F. J. Fiescher.....	25,000	4,632	169,506	67,249
Prosser.....	Benton.....	Citizens State Bank.....	1905	C. H. Pearl.....	Guy H. Pearl.....	25,000	27,043	202,159	45,679
Prosser.....	Benton.....	Prosser State Bank.....	1902	J. F. Sears.....	40,000	10,012	236,354	33,662

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Pullman.....	Whitman.....	Pullman State Bank.....	1892	R. O. McOroskey....	J. N. Scott.....	\$37,500	\$18,678	\$611,653	\$160,721
Puyallup.....	Pierce.....	Citizens State Bank.....	1898	Geo. W. Edgerton...	W. A. Miller.....	25,000	21,916	366,197	50,026
Puyallup.....	Pierce.....	Puyallup State Bank.....	1906	J. S. Alsbaugh.....	J. M. Jones.....	25,000	9,767	327,610	88,859
Quincy.....	Grant.....	Quincy Valley State Bank.....	1913	G. E. Sanderson....	R. O. Wightman....	10,000	4,220	110,568	35,888
Raymond.....	Pacific.....	Willapa Harbor State Bank.....	1908	H. W. MacPhail....	E. E. Collett.....	50,000	13,250	421,721	141,951
Reardan.....	Lincoln.....	Farmers State Bank.....	1909	John Mahrt.....	E. G. Ahrens.....	25,000	9,226	394,956	170,451
Redmond.....	King.....	Redmond State Bank.....	1911	F. M. Roberts.....	O. A. Shinstrom....	10,000	4,988	94,577	20,798
Renton.....	King.....	Citizens Bank of Renton.....	1909	H. Evans.....	R. W. Gilham.....	25,000	6,008	258,101	69,353
Republic.....	Ferry.....	Ferry County State Bank.....	1904	P. H. Walsh.....	Jos. L. Walsh.....	25,000	18,570	186,250	96,364
Richland.....	Benton.....	Security State Bank.....	1914	W. R. Amon.....	A. L. Nelson.....	20,000	1,251	73,327	24,046
Ridgefield.....	Clarke.....	Ridgefield State Bank.....	1910	E. L. Thompson....	J. E. Keith.....	10,000	2,440	58,340	23,733
Ritzville.....	Adams.....	German American State Bank.....	1904	O. H. Clodius.....	J. F. Lansing.....	75,000	23,084	582,206	311,008
Riverside.....	Okanogan.....	Okanogan State Bank.....	1903	Hans Lund.....	Arthur Lund	25,000	16,190	176,312	98,970
Rockford.....	Spokane.....	Farmers & Merchants.....	1906	J. W. Lowe.....	W. L. Oliver.....	17,500	4,478	195,024	94,847
Rosalia.....	Whitman.....	Bank of Rosalia, Inc.....	1898	.....	E. W. Wagner.....	25,000	8,553	277,548	79,307
Roslyn.....	Kittitas.....	Ole Elum State Bank..... (Branch of Ole Elum State Bank.)	.....	.....	G. Bing, Cashier...	.....	.....	.....	.....
Roy.....	Pierce.....	Roy State Bank.....	1908	Wm. T. Perkins....	E. S. Emigh.....	10,000	5,919	89,226	31,749
Ruff.....	Grant.....	Ruff State Bank.....	1911	M. A. Wiley.....	F. R. Amende.....	10,000	5,586	99,284	22,556

Directory of State Banks and Trust Companies Reporting November 17, 1916.—Continued.

Town	County	NAME OF BANK	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Deposits	Cash and Due from Banks
Seattle.....	King.....	American Savings Bank & Trust Co...	1901	J. P. Gleason.....	John K. Bush.....	\$300,000	\$111,078	\$2,238,738	\$571,558
Seattle.....	King.....	Bank for Savings.....	1907	Daniel Kelleher.....	W. H. Orothers.....	400,000	25,108	799,225	131,120
Seattle.....	King.....	Broadway State Bank.....	1907	P. L. Bingay.....	Chas. M. Oulp.....	25,000	* 6,117	194,167	84,527
Seattle.....	King.....	Canadian Bank of Commerce.....	1900	E. B. Ireland, Mgr..	.....	200,000	60,504	5,371,801	1,678,908
Seattle.....	King.....	Citizens Bank of Georgetown.....	1907	Fred W. Newell.....	W. D. Millar.....	25,000	* 1,688	132,658	8,952
Seattle.....	King.....	Union Savings & Trust Co., Georgetown (Branch of Union Savings & Trust Company, Seattle.)	.....	.....	Max G. Schmidt, Manager.	.....	.....	.....	.....
Seattle.....	King.....	Dexter Horton Trust & Savings Bank.	1908	O. J. Smith.....	W. W. Scruby.....	400,000	289,527	7,261,719	1,021,791
Seattle.....	King.....	Fremont State Bank.....	1908	O. E. Remsburg.....	J. L. Booth.....	50,000	* 3,069	160,071	36,210
Seattle.....	King.....	German American Mercantile Bank.....	1905	H. Middaugh.....	I. J. Riley.....	200,000	13,142	1,479,217	288,288
Seattle.....	King.....	Green Lake State Bank.....	1907	Geo. W. Lear.....	Louis K. Lear.....	25,000	9,984	149,113	32,638
Seattle.....	King.....	Guardian Trust & Savings Bank.....	1915	O. K. Sturtevant....	Thos. H. Kolderup..	100,000	* 2,642	506,754	291,832
Seattle.....	King.....	Japanese Commercial Bank.....	1907	M. Furuya.....	M. Matsumoto	50,000	64,969	488,817	101,376
Seattle.....	King.....	King County State Bank.....	1913	J. F. Ranning.....	R. W. Green.....	30,000	1,118	118,386	19,418
Seattle.....	King.....	Metropolitan Bank	1909	H. C. Henry.....	R. P. Loomis.....	200,000	120,404	2,196,126	785,416
Seattle.....	King.....	Northern Bank & Trust Company.....	1906	W. L. Collier.....	O. B. Sandefer.....	100,000	17,514	1,602,336	261,552
Seattle.....	King.....	North Side State Bank.....	1914	Jacob Schaefer.....	Chas. L. Schaefer..	10,000	* 629	83,679	5,352
Seattle.....	King.....	Northwest Trust & Safe Deposit Co...	1900	E. Shorrocks.....	J. V. A. Smith.....	100,000	22,922	1,528,395	268,978

* Expense.

Directory of State Banks and Trust Companies Reporting November 17, 1916.—Continued.

Town	County	NAME OF BANK	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Deposits	Cash and Due from Banks
Seattle	King	Oriental American Bank	1905	M. Furuya	H. Haagawa	\$40,000	\$1,514	\$205,957	\$28,261
Seattle	King	Peoples Savings Bank	1899	E. C. Neufelder	Jos. T. Greenleaf	100,000	237,000	2,572,388	\$45,892
Seattle	King	Rainier Valley State Bank	1910	B. T. Toby	T. S. Toby	25,000	3,708	187,022	21,396
Seattle	King	Scandinavian American Bank	1892	A. Chlberg	J. F. Lane	500,000	680,284	13,705,074	3,855,969
Seattle	King	Seaboard Bank	1916	Lee H. Wakefield	C. H. Howell	100,000	15,283	286,789	104,042
Seattle	King	Seattle Trust Company	1906	J. E. Chulberg	A. F. Bailey, Sec'y-Treasurer.	250,000	79,908	.....	41,743
Seattle	King	Specks Bank	1909	J. T. Kikutake	C. M. Uyeda	25,000	2,800	173,297	42,043
Seattle	King	State Bank of Seattle	1905	E. L. Grondahl	Hugo Carlson	100,000	20,839	1,738,974	302,982
Seattle	King	Title Trust Company	1901	J. W. Maxwell	Charlton L. Hall, Secretary.	250,000	55,065	.....	1,221
Seattle	King	Union Savings & Trust Company	1903	James D. Hoge	Rollin Sanford	600,000	194,082	4,637,312	1,233,907
Seattle	King	Union Trust Company	1892	Watson C. Squire	.....	800,000	82,487	.....	.....
Seattle	King	United States Trust Company	1909	Samuel Hill	J. C. Potter, Treas.	500,000	1,000,000	.....	.....
Seattle	King	University State Bank	1903	Geo. W. Lear	Harry B. Lear	50,000	10,888	681,488	165,679
Seattle	King	West Seattle State Bank	1913	W. T. Campbell	J. B. Campbell	10,700	899	80,654	11,980
Sedro Woolley	Skagit	C. E. Bingham & Co.	1912	C. E. Bingham	Q. P. Reno	50,000	16,878	499,185	161,624
Selah	Yakima	Selah State Bank	1910	C. S. Sundberg	Elmer Dahlin	15,000	6,186	115,365	44,966
Sequim	Clallam	State Bank of Sequim	1910	H. J. Bugge	R. W. Behumacher	10,000	2,729	80,851	27,405
Shelton	Mason	State Bank of Shelton	1898	M. E. Reed	O. I. Pritchard	25,000	27,676	339,583	109,860

Directory of State Banks and Trust Companies Reporting November 17, 1916.—Continued.

Town	County	NAME OF BANK	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Deposits	Cash and Due from Banks
Snohomish....	Snohomish....	Commercial Bank of Snohomish County	1903	Herman Friese.....	Alex. Livingston ...	\$25,000	\$3,523	\$162,302	\$31,235
South Bend....	Pacific.....	Pacific State Bank.....	1906	Jos. G. Helm.....	L. W. Homan.....	100,000	49,407	661,787	255,466
Spangle.....	Spokane.....	State Bank of Spangle.....	1906	John Peters.....	O. W. Newlon.....	15,000	5,049	213,560	68,040
Spokane.....	Spokane.....	Bank of Montreal.....	1903	W. Dick, Mgr.....	.....	100,000	15,864	1,633,061	1,699,661
Spokane.....	Spokane.....	Clark Bros. & Klein Trust Company...	1901	A. O. Klein.....	J. Heaton, Sec'y...	15,000	* 28	.....	20,645
Spokane.....	Spokane.....	Farmers & Mechanics Bank.....	1904	Ortho Dorman.....	B. O. Yancey.....	50,000	8,912	252,171	59,116
Spokane.....	Spokane.....	Lincoln Trust Company.....	1916	M. E. Hay.....	E. T. Hay, Sec'y...	100,000	37,470	.....	14,036
Spokane.....	Spokane.....	Scandinavian American Bank.....	1903	O. A. Johnson.....	O. Larson	100,000	51,825	862,530	188,962
Spokane.....	Spokane.....	Security State Bank.....	1906	G. W. Stocker.....	E. W. Edgington...	25,000	5,603	230,816	119,161
Spokane.....	Spokane.....	Spokane & Eastern Trust Company....	1890	R. L. Rutter.....	W. T. Triplett, Secretary.	1,000,000	399,665	11,601,617	4,084,807
Spokane.....	Spokane.....	Spokane State Bank.....	1907	J. A. Anderson.....	O. W. Tupper.....	50,000	11,973	269,092	75,335
Spokane.....	Spokane.....	Union Park Bank.....	1906	H. M. Strathern.....	E. B. Anderson.....	25,000	5,856	169,550	33,592
Spokane.....	Spokane.....	Union Trust & Savings Bank.....	1907	D. W. Twohy.....	A. S. Blum.....	500,000	203,892	1,188,985	149,532
Spokane.....	Spokane.....	Wall Street Bank.....	1906	Gust Pearson.....	G. Pearson	25,000	* 1,259	57,457	19,823
Spokane.....	Spokane.....	Washington Safe Deposit & Trust Co..	1901	W. S. McCrea.....	W. G. Merryweather, Secretary.	100,000	149,724	.....	746
Spokane.....	Spokane.....	Washington Trust Company.....	1902	M. B. Connelly.....	Ira W. Bedle.....	200,000	54,014	823,278	227,675
Sprague.....	Lincoln.....	Bank of Sprague.....	1901	A. L. Smalley.....	Ralph R. Jones.....	30,000	23,385	830,560	234,703

* Expense.

Directory of State Banks and Trust Companies Reporting November 17, 1916.—Continued.

Town	County	NAME OF BANK	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Deposits	Cash and Due from Banks
Sprague.....	Lincoln.....	Farmers State Bank.....	1915	H. D. Mills.....	August Witt	\$25,000	\$132	\$118,280	\$58,443
Springdale.....	Stevens.....	Farmers & Merchants Bank.....	1908	C. W. Winter.....	Chas. O. Snapp.....	10,000	3,481	73,596	16,148
Stanwood.....	Snohomish....	Bank of Stanwood.....	1904	W. O. Brokaw.....	.....	25,000	12,281	319,349	109,859
Starbuck.....	Columbia.....	Bank of Starbuck.....	1906	W. E. Sprout.....	M. O. Zintheo.....	25,000	9,332	91,977	24,806
Steptoe.....	Whitman.....	Steptoe State Bank.....	1911	Lewis Stalret.....	M. O. Handley.....	20,000	3,004	50,200	18,587
Stevenson.....	Skamania.....	Bank of Stevenson.....	1907	E. P. Ash.....	Geo. F. Christensen.	10,000	7,681	106,867	25,098
St. John.....	Whitman.....	Farmers State Bank.....	1914	W. S. Imbler.....	H. F. Imbler.....	20,000	1,846	153,521	78,524
St. John.....	Whitman.....	St. John State Bank.....	1904	H. O. Fisher.....	Harry Terhune	25,000	9,401	416,889	120,737
Sultan.....	Snohomish....	Citizens Bank of Sultan.....	1910	G. G. Startup.....	W. M. Jenkins.....	10,000	1,423	84,668	15,137
Sumas.....	Whatcom.....	Garrison Bros. State Bank.....	1910	L. A. Garrison.....	F. S. Garrison.....	40,000	6,546	155,800	75,374
Sumner.....	Pierce.....	Farmers State Bank.....	1916	C. M. Case.....	R. P. Finney.....	25,000	* 1,879	133,134	15,360
Sunnyside.....	Yakima.....	The Sunnyside Bank.....	1902	R. G. Page.....	Horace L. Miller....	50,000	12,527	266,247	108,309
Tacoma.....	Pierce.....	Bankers Trust Company.....	1894	M. W. Peterson....	M. M. Ogden.....	300,000	* 3,441	592,925	41,846
Tacoma.....	Pierce.....	Fidelity Trust Company.....	1899	Jno. S. Baker.....	El. V. Alward.....	500,000	518,165	4,834,602	1,014,098
Tacoma.....	Pierce.....	North Pacific Bank.....	1906	E. S. Prentice.....	P. Wallerich	25,000	11,729	216,464	46,553
Tacoma.....	Pierce.....	Puget Sound Bank & Trust Company.	1890	H. N. Tinker.....	W. W. Newschwander	100,000	57,507	974,777	220,564
Tacoma.....	Pierce.....	Scandinavian American Bank.....	1907	J. E. Ohlberg.....	E. O. Johnson.....	200,000	21,235	2,618,601	390,380

• Expense.

Directory of State Banks and Trust Companies Reporting November 17, 1916.—Continued.

Town	County	NAME OF BANK	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Deposits	Cash and Due from Banks
Tacoma.....	Pierce.....	Tacoma Savings Bank & Trust Co....	1913	Chester Thorne.....	A. A. Miller.....	\$200,000	\$49,234	\$1,077,440	\$164,194
Tekoa.....	Whitman.....	Citizens State Bank.....	1904	A. B. Willard.....	R. S. Kalbfleisch.....	25,000	11,014	269,822	102,983
Tekoa.....	Whitman.....	Tekoa State Bank.....	1902	D. W. Truax.....	O. D. McKeenan.....	30,000	20,195	357,770	82,983
Tenino.....	Thurston.....	Citizens Bank	1914	S. M. Peterson.....	L. H. Hubbard.....	10,000	448	45,191	9,435
Thornton.....	Whitman.....	Comegys, Hanford & Miller Bank.....	1914	H. W. Hanford.....	Ralph Comegys	15,000	3,160	200,457	97,068
Toledo.....	Lewis.....	Toledo State Bank.....	1909	R. W. Bell.....	.....	10,000	1,764	80,198	15,505
Tolt.....	King.....	Tolt State Bank.....	1911	E. B. Cowles.....	.....	10,000	2,332	60,086	24,414
Toppenish.....	Yakima.....	Central Bank of Toppenish.....	1910	H. M. Gilbert.....	H. B. Miller.....	50,000	4,587	184,288	85,823
Toppenish.....	Yakima.....	Traders Bank	1908	J. D. Cornett.....	W. S. Doran.....	25,000	9,847	338,482	198,277
Touchet.....	Walla Walla..	Touchet State Bank.....	1914	H. H. Hanson.....	O. L. Renn.....	15,000	650	46,253	15,255
Twisp.....	Okanogan....	Commercial Bank	1909	Wm. G. Hughes.....	Geo. W. Sprouse....	35,000	12,967	126,831	42,725
Unlontown....	Whitman.....	Farmers State Bank.....	1908	S. Hillard.....	O. W. Bean.....	10,000	5,989	309,742	150,418
Vader.....	Lewis.....	Little Falls State Bank.....	1911	R. H. Campbell.....	A. N. Obeney.....	10,000	2,293	64,463	28,954
Valleyford....	Spokane.....	Community State Bank.....	1916	O. P. Thomas.....	C. H. Tart.....	10,000	* 152	10,252	9,877
Vancouver....	Clarke.....	Washington Exchange Bank.....	1912	Lloyd DuBois.....	O. F. Zumsteg.....	50,000	7,882	270,534	87,469
Vashon.....	King.....	Vashon State Bank.....	1909	L. W. Lewis.....	T. Hansen	10,000	2,814	80,824	17,124
Waitsburg.....	Walla Walla..	Exchange Bank	1904	M. Zuger, Sr.....	H. P. Petersen.....	50,000	27,591	311,781	145,255

* Expense.

Directory of State Banks and Trust Companies Reporting November 17, 1916.—Continued.

Town	County	NAME OF BANK	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Deposits	Cash and Due from Banks
Walla Walla...	Walla Walla..	Farmers Savings Bank.....	1889	W. P. Winans.....	J. Chitwood	\$200,000	\$56,560	\$1,185,713	\$498,419
Walla Walla...	Walla Walla..	Peoples State Bank.....	1911	H. H. Marshall.....	W. H. Tharp.....	50,000	45,426	977,196	271,043
Walla Walla...	Walla Walla..	Walla Walla Safety Deposit & Trust Company.	1900	W. P. Lathrop.....	T. A. Paul, Sec'y...	4,000	.....	.....	.....
Warden.....	Grant.....	Warden State Bank.....	1908	Chas. Lundenberg...	I. H. Mullowney....	10,000	5,328	67,155	18,328
Washougal....	Clarke.....	Clarke County Bank.....	1907	O. M. Keep.....	Thos. S. Keep.....	15,000	1,664	115,114	42,832
Waterville....	Douglas.....	Douglas County Bank.....	1904	M. E. Lies.....	O. S. Valentine....	30,000	31,575	645,961	246,843
Waterville....	Douglas.....	Waterville Savings Bank.....	1904	C. T. Hansen.....	Geo. P. Wiley.....	50,000	30,206	315,494	57,309
Waverly.....	Spokane.....	Waverly Exchange Bank.....	1908	F. Klenbaum.....	Ralph W. Darknell..	10,000	2,633	156,406	37,878
Wenatchee....	Chelan.....	Columbia Valley Bank.....	1894	Guy O. Browne.....	Chas. E. Owens.....	100,000	28,546	933,429	350,514
Wenatchee....	Chelan.....	Commercial Bank & Trust Company..	1902	Frank W. Shultz....	David Holmberg ...	50,000	6,898	492,317	194,072
Wheeler.....	Grant.....	Wheeler State Bank.....	1914	E. O. Davis.....	J. E. Bassett.....	10,000	1,769	63,214	19,207
White Bluffs...	Benton.....	First Bank of White Bluffs.....	1909	L. E. Johnson.....	W. J. Kincaid.....	10,000	2,122	63,743	24,494
White Salmon.	Klickitat....	Columbia State Bank.....	1916	G. A. Read.....	A. O. Keefhaver....	25,000	1,091	180,439	54,462
White Swan...	Yakima.....	White Swan Bank.....	1916	Alexander Mackel...	C. E. Reindg.....	6,000	* 711	6,918	10,252
Wilbur.....	Lincoln.....	State Bank of Wilbur.....	1912	E. L. Farnsworth...	Chas. Hudkins	25,000	13,854	686,549	180,409
Wilkeson.....	Pierce.....	First Bank of Wilkeson.....	1908	W. H. Pringle.....	T. J. Anderson.....	15,000	8,252	181,561	26,145

* Expense.

Directory of State Banks and Trust Companies Reporting November 17, 1916.—Continued.

Town	County	NAME OF BANK	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Deposits	Cash and Due from Banks
Wilson Creek..	Grant.....	Wilson Creek State Bank.....	1913	Donald Urquhart....	T. Claud Bennett....	\$15,000	\$8,880	\$100,028	\$29,517
Winlock.....	Lewis.....	State Bank of Winlock.....	1910	H. A. Baldwin.....	Frank R. Neas.....	15,000	3,548	106,862	23,569
Winona.....	Whitman.....	Bank of Winona.....	1907	W. C. Morrow.....	Louis Ellert	15,000	6,217	138,960	73,566
Winthrop.....	Okanogan....	Farmers State Bank.....	1915	Wm. G. Hughes.....	O. B. Jaynes.....	10,000	* 153	36,188	11,341
Withrow.....	Douglas.....	Withrow State Bank.....	1913	F. E. Weston.....	L. A. Weston.....	15,000	10,020	240,802	82,490
Woodland.....	Cowlitz.....	Woodland State Bank.....	1907	L. N. Plamondon...	Geo. E. Cochrane...	25,000	3,453	95,109	19,969
Yacolt.....	Clarke.....	First State Bank.....	1910	C. F. Hendricksen...	O. Jorgen Olson.....	10,000	2,042	59,910	26,783

* Expense.

DIRECTORY OF NATIONAL BANKS.

FROM REPORT OF COMPTROLLER OF THE CURRENCY OF NATIONAL BANKS REPORTING UNDER DATE OF SEPTEMBER 12, 1916.

Town	County	NAME OF BANK	President	Cashier	Capital Stock	Surplus and Undivided Profits	Time and Demand Deposits	Due to Banks and Other Liabilities	Due from Banks, Cash and Exchange
Auburn.....	King.....	First National Bank.....	C. M. Hall.....	W. T. Behne.....	\$50,000	\$11,953	\$334,370	.....	\$104,656
Bellingham....	Whatcom.....	Bellingham National Bank.....	V. A. Roeder.....	F. F. Handschy...	200,000	306,452	1,741,291	20,711	730,352
Bellingham....	Whatcom.....	First National Bank.....	E. W. Purdy.....	John Kalsen	200,000	174,931	2,037,035	\$64,608	775,304
Bellingham....	Whatcom.....	Northwestern National Bank.....	H. B. Paige.....	O. K. McMillen....	100,000	16,894	744,297	13,505	252,804
Bremerton....	Kitsap.....	First National Bank.....	C. E. Thomas.....	O. B. West.....	50,000	827	353,276	597	65,119
Brewster.....	Okanogan....	First National Bank.....	Amos Topper.....	Fred D. Rice.....	25,000	1,393	66,492	10,000	17,478
Burlington....	Skagit.....	Burlington National Bank.....	H. E. Cleveland...	Chas. Callahan ...	25,000	968	93,011	.....	14,612
Burlington....	Skagit.....	First National Bank.....	J. H. Knutzen.....	E. L. Wilson.....	25,000	2,996	69,242	.....	21,658
Camas.....	Clarke.....	First National Bank.....	O. F. Johnson.....	F. M. Hayungs...	25,000	6,063	272,804	.....	83,236
Chehalis.....	Lewis.....	Chehalis National Bank.....	D. W. Noble.....	A. S. Cory.....	50,000	10,831	397,391	9,027	100,002
Cheney.....	Spokane.....	National Bank of Cheney.....	F. M. Martin.....	N. A. Rolfe.....	25,000	4,395	173,173	67	89,790
Cheney.....	Spokane.....	Security National Bank.....	W. J. Sutton.....	R. H. Macartney..	25,000	12,804	331,243	382	70,463
Chewelah.....	Stevens.....	First National Bank.....	O. W. Winter.....	F. L. Reinohl.....	25,000	9,920	196,214	.....	24,392
Clarkston.....	Asotin.....	First National Bank.....	O. F. Waterman..	W. A. Waterman..	25,000	7,013	210,436	.....	53,280
Cle Elum.....	Kititas.....	First National Bank.....	W. H. Pringle.....	J. O. Beeson.....	25,000	3,608	159,423	.....	28,618
Colfax.....	Whitman....	Colfax National Bank.....	O. L. MacKenzie...	Dolph Coolidge ...	200,000	40,000	1,126,171	299,246	385,165

Directory of National Banks—Continued.

Town	NAME OF BANK	President	Cashier	Capital Stock	Surplus and Undivided Profits	Assets	Due from Banks, Cash and Exchange
Oelax.....	Whitman.....	P. E. Stravens.....	W. R. Anderson...	\$160,000	\$69,600	\$607,616	\$123,720
Oelville.....	First National Bank.....	Hugh Waddell.....	A. L. Rogers.....	60,000	16,074	305,004	66,962
Davenport.....	Davenport National Bank.....	D. M. Drumbeller..	E. N. Imus.....	100,000	28,300	765,827	174,940
Dayton.....	Broughton National Bank..	C. J. Broughton..	A. P. Oabell.....	50,000	15,000	418,768	247,363
Dayton.....	Columbia National Bank.....	Levi Ankeny.....	J. W. James.....	100,000	175,365	972,864	308,829
Ellensburg.....	Washington National Bank.....	J. H. Smithson....	O. W. Johnsons..	50,000	31,469	828,290	217,076
Everett.....	First National Bank.....	W. C. Butler.....	L. L. Crosby.....	250,000	112,360	2,208,662	1,190,856
Garfield.....	Garfield National Bank.....	G. W. Nye.....	L. P. Nelson.....	25,000	5,000	127,537	32,338
Harrington....	First National Bank.....	Harry Ochs.....	W. W. Downie...	50,000	7,122	205,556	31,445
Hillyard.....	First National Bank.....	W. S. Graet.....	H. B. Smead.....	25,000	3,317	179,210	48,755
Hoquiam.....	First National Bank.....	W. L. Adams.....	A. G. Rockwell...	100,000	123,190	1,660,169	490,535
Kelso.....	First National Bank.....	E. S. Collins.....	O. O. Bashor.....	25,000	5,805	234,532	115,169
Kent.....	First National Bank.....	A. F. Morrill.....	D. T. Coleman...	50,000	28,126	282,007	100,514
Kennewick.....	First National Bank.....	L. E. Johnson.....	J. L. Johnson.....	50,000	9,307	273,791	71,068
Lind.....	First National Bank.....	H. E. Gritman....	H. B. Smead.....	35,000	5,004	210,757	79,747
Medical Lake..	First National Bank.....	W. R. Cunningham, Jr.	B. W. Hughes.....	25,000	4,718	184,938	50,372
Monroe.....	First National Bank.....	E. M. Stephens....	Roy W. Jellison...	25,000	26,836	245,078	96,295
Monroe.....	Monroe National Bank.....	O. P. Elwell.....	W. H. Clark.....	25,000	1,286	123,087	62,468

Directory of National Banks—Continued.

Town	County	NAME OF BANK	President	Cashier	Capital Stock	Surplus and Undivided Profits	Time and Demand Deposits	Due to Banks and Other Liabilities	Due from Banks, Cash and Exchange
Montesano.....	Grays Harbor	Montesano National Bank.....	F. L. Carr.....	S. L. Geisler.....	\$25,000	\$5,061	\$127,041	\$269	\$25,888
Mt. Vernon....	Skagit.....	First National Bank.....	N. J. Moldstad....	R. G. Hannaford..	50,000	39,364	646,660	46,851	184,763
Mt. Vernon....	Skagit.....	Mt. Vernon National Bank.....	O. Gunderson.....	R. L. Davis.....	50,000	7,180	263,927	5,960	47,464
North Yakima.	Yakima.....	First National Bank.....	W. L. Steinweg....	C. R. Donovan....	100,000	166,063	2,158,776	74,753	682,889
North Yakima.	Yakima.....	Yakima National Bank.....	George Donald....	F. Bartholet	50,000	232,777	1,874,851	61,744	659,125
Oakesdale.....	Whitman.....	National Bank of Oakesdale.....	F. A. Davis.....	J. Weston Martin..	25,000	4,555	120,068	.....	28,394
Okanogan.....	Okanogan....	First National Bank.....	C. E. Hansen.....	Harry J. Kerr....	25,000	3,246	172,223	.....	44,670
Olympia.....	Thurston....	Capital National Bank.....	O. J. Lord.....	W. J. Foster.....	100,000	178,040	1,646,899	98,094	708,586
Olympia.....	Thurston....	Olympia National Bank.....	P. M. Troy.....	F. M. Kenney.....	50,000	90,523	576,175	.....	173,849
Oroville.....	Okanogan....	First National Bank.....	A. P. Murray.....	Monroe Herman....	50,000	5,800	201,836	18,685	60,214
Palouse.....	Whitman....	National Bank of Palouse.....	R. C. McCroskey..	Geo. O. Jewett....	50,000	5,800	201,836	18,685	60,214
Pasco.....	Franklin....	First National Bank.....	Robert Jahnke....	T. J. Cooper.....	50,000	17,516	272,508	7,273	92,366
Port Angeles...	Clallam.....	Citizen's National Bank.....	G. M. Lauridsen..	J. O. Christensen..	25,000	9,168	356,296	.....	150,879
Port Townsend	Jefferson....	First National Bank.....	N. H. Latimer....	H. D. Hopkins....	50,000	23,121	430,398	3,180	76,530
Pullman.....	Whitman....	First National Bank.....	M. W. Whitlow....	F. O. Forrest.....	75,000	23,945	517,367	37,201	139,974
Reardan.....	Lincoln....	Reardan National Bank.....	H. G. Burns.....	E. A. Davidson....	50,000	13,625	341,434	2,017	112,500
Ritzville.....	Adams.....	First National Bank.....	F. E. Robbins.....	F. H. Haupt.....	75,000	22,067	411,401	3,511	53,260
Ritzville.....	Adams.....	Pioneer National Bank.....	O. H. Greene.....	W. H. Martin.....	75,000	50,523	432,781	17,252	119,306

Directory of National Banks—Continued.

Town	County	NAME OF BANK	President	Cashier	Capital Stock	Assets	Due to Banks and Other Liabilities	Due from Banks, Cash and Exchange
Rosalia.....	Whitman.....	Whitman County National Bank.....	W. E. Dwyer.....	F. J. Wilmer.....	\$40,000	\$12,240	\$484,080	\$205,941
Seattle.....	King.....	Dexter-Horton National Bank.....	N. H. Latimer.....	C. E. Burnside.....	1,200,000	299,228	6,829,570	3,967,618
Seattle.....	King.....	First National Bank.....	M. A. Arnold.....	O. A. Philbrick.....	300,000	126,128	5,148,544	2,365,185
Seattle.....	King.....	National Bank of Commerce.....	M. F. Beckus.....	Stockton Veasey..	1,000,000	1,135,386	9,700,008	5,151,622
Seattle.....	King.....	National City Bank.....	J. W. Maxwell.....	N. H. Bell.....	500,000	171,044	2,758,767	1,069,128
Seattle.....	King.....	Seattle National Bank.....	F. K. Struve.....	W. B. Peachy.....	1,000,000	311,125	12,541,742	6,246,417
Sedro Woolley.....	Skagit.....	First National Bank.....	J. O. Wiszen.....	J. Guddall.....	25,000	6,791	248,845	31,551
Snodumish.....	Snodumish.....	First National Bank.....	H. O. Connery.....	W. M. Snyder.....	50,000	69,506	613,787	139,787
Spokane.....	Spokane.....	Exchange National Bank.....	E. T. Coman.....	O. E. McBroom.....	1,000,000	267,658	5,813,877	2,756,221
Spokane.....	Spokane.....	Fidelity National Bank.....	T. H. Brewer.....	J. J. Bouse.....	250,000	54,647	2,036,861	806,459
Spokane.....	Spokane.....	Old National Bank.....	D. W. Twoby.....	J. A. Yeomans.....	1,000,000	540,975	11,598,435	4,384,076
Sunnyside.....	Yakima.....	First National Bank.....	O. K. Strick.....	H. A. Bouse.....	50,000	5,473	124,622	26,536
Tacoma.....	Pierce.....	National Bank of Tacoma.....	Ralph S. Stacy.....	Stephen Appleby..	1,000,000	238,732	7,594,089	3,054,376
Tonasket.....	Okanogan.....	First National Bank.....	Hans Lund.....	A. Lund.....	25,000	8,860	100,226	25,424
Toppenish.....	Yakima.....	First National Bank.....	F. A. Williams.....	L. J. Goodrich.....	25,000	21,171	164,377	47,570
Vancouver.....	Clark.....	U. S. National Bank.....	J. M. Langsdorf..	J. S. G. Langsdorf..	100,000	33,461	479,749	161,308
Vancouver.....	Clark.....	Vancouver National Bank.....	G. H. Adams.....	J. M. Denny.....	100,000	26,813	684,414	158,928
Waitsburg.....	Walla Walla.....	First National Bank.....	J. W. Morgan.....	W. G. Shuham.....	50,000	72,411	644,323	141,171

Directory of National Banks—Continued.


Town	County	NAME OF BANK	President	Cashier	Capital Stock	Surplus and Undivided Profits	Time and Demand Deposits	Due to Banks and Other Liabilities	Due from Banks, Cash and Exchange
Walla Walla...	Walla Walla..	Baker-Boyer National Bank.....	Miles O. Moore....	H. H. Turner.....	\$100,000	\$226,825	\$1,807,094	\$156,289	\$894,387
Walla Walla...	Walla Walla..	First National Bank.....	Levi Ankeny.....	P. M. Winans.....	200,000	329,494	1,381,578	150,048	557,055
Walla Walla...	Walla Walla..	Third National Bank.....	Geo. E. Kellough..	Fred W. Wilson...	100,000	25,217	725,806	14,496	272,727
Wapato.....	Yakima.....	First National Bank.....	Alex E. McCredy..	L. W. Taylor.....	25,000	6,580	250,044	.....	110,199
Washtucna....	Adams.....	First National Bank.....	W. R. Cunningham- ham, Jr.	Wm. A. Pearce....	50,000	10,209	189,742	30,968	57,991
Wenatchee....	Chelan.....	First National Bank.....	J. K. McCornack..	L. L. Mathews....	50,000	5,538	421,745	18,551	92,861
Zillah.....	Yakima.....	First National Bank.....	J. D. Cornett.....	L. H. Kuhn.....	25,000	10,181	126,384	.....	27,475

ANNUAL STATEMENTS
OF THE
Building, Loan and Savings
Associations

AUTHORIZED TO DO BUSINESS
IN THE
STATE OF WASHINGTON
1915-1916

Issued by
C. W. CLAUSEN
STATE AUDITOR

PROCEEDINGS OF
EIGHTH ANNUAL CONVENTION
OF
ASSOCIATIONS

OLYMPIA, WASH.
FRANK M. LAMBORN  **PUBLIC PRINTER**
1917

BUILDING, LOAN AND SAVINGS ASSOCIATIONS

**AUTHORIZED TO DO BUSINESS IN THE STATE OF WASHINGTON FOR
THE YEAR ENDING AUGUST 31, 1916.**

STATE ASSOCIATIONS.

ABERDEEN SAVINGS AND LOAN ASSOCIATION, of Aberdeen, Washington.
AMERICAN SAVINGS AND LOAN ASSOCIATION, of Everett, Washington.
CASCADE SAVINGS AND LOAN ASSOCIATION, of Everett, Washington.
CITIZENS SAVINGS AND LOAN SOCIETY, of Spokane, Washington.
**EQUITABLE BUILDING, LOAN AND INVESTMENT ASSOCIATION, of
Seattle, Washington.**
FIDELITY SAVINGS AND LOAN ASSOCIATION, of Spokane, Washington.
**GERMAN SAVINGS, BUILDING AND LOAN ASSOCIATION, of Seattle,
Washington.**
THE HOME SAVINGS AND LOAN ASSOCIATION, of Seattle, Washington.
**INDUSTRIAL BUILDING AND LOAN ASSOCIATION, of South Bellingham,
Washington.**
**INLAND EMPIRE BUILDING AND LOAN ASSOCIATION, of Walla Walla,
Washington.**
**INTER-STATE BUILDING, LOAN AND TRUST ASSOCIATION, of Walla
Walla, Washington.**
**KITSAP COUNTY SAVINGS AND LOAN ASSOCIATION, of Bremerton,
Washington.**
MODERN SAVINGS AND LOAN ASSOCIATION, of Tacoma, Washington.
MUTUAL SAVINGS AND LOAN ASSOCIATION, of Seattle, Washington.
**NEW WHATCOM BUILDING AND LOAN ASSOCIATION, of Bellingham,
Washington.**
**NORTHWESTERN BUILDING AND LOAN ASSOCIATION, of Tacoma,
Washington.**
OLYMPIA BUILDING AND LOAN ASSOCIATION, of Olympia, Washington.
PACIFIC BUILDING AND LOAN ASSOCIATION, of Tacoma, Washington.
**PRUDENTIAL SAVINGS AND LOAN ASSOCIATION, of Seattle, Wash-
ington.**
**PUGET SOUND SAVINGS AND LOAN ASSOCIATION, of Seattle, Wash-
ington.**
PULLMAN SAVINGS AND LOAN ASSOCIATION, of Pullman, Washington.
SAVINGS AND LOAN ASSOCIATION, of Bellingham, Washington.
**SCANDINAVIAN AMERICAN SAVINGS AND LOAN ASSOCIATION, of
Everett, Washington.**
SEATTLE SAVINGS AND LOAN ASSOCIATION, of Seattle, Washington.
SECURITY SAVINGS AND LOAN SOCIETY, of Aberdeen, Washington.
**SKAGIT COUNTY SAVINGS AND LOAN ASSOCIATION, of Anacortes,
Washington.**
SPOKANE SAVINGS AND LOAN ASSOCIATION, of Spokane, Washington.
STATE BUILDING AND LOAN ASSOCIATION, of Tacoma, Washington.
TACOMA SAVINGS AND LOAN ASSOCIATION, of Tacoma, Washington.
UNITED STATES SAVINGS AND LOAN SOCIETY, of Tacoma, Washington.
**WASHINGTON SAVINGS AND LOAN ASSOCIATION, of Seattle, Wash-
ington.**
**WEST COAST SAVINGS AND LOAN ASSOCIATION, of Centralia, Wash-
ington.**
**THE YAKIMA SAVINGS AND LOAN ASSOCIATION, of North Yakima,
Washington.**

FOREIGN ASSOCIATIONS.

EQUITABLE SAVINGS AND LOAN ASSOCIATION, of Portland, Oregon.
 PACIFIC STATES SAVINGS AND LOAN COMPANY, of San Francisco,
 California.
 WESTERN LOAN AND BUILDING COMPANY, of Salt Lake, Utah.

SAVINGS AND LOAN ASSOCIATIONS.

During the past two years nine new associations have entered the field and a better understanding by the public as to the operation of the law has led to more confidence and consequently a large increase in the number of members and the amount of their subscriptions.

The following figures reflect the growth of the business during the past two years:

Number of domestic associations, June 30, 1914.....	21
Number of domestic associations, June 30, 1916.....	33
Number of members, June 30, 1914.....	16,420
Number of members, June 30, 1916.....	39,520

Assets of domestic associations, June 30, 1914...	\$7,877,467 14
Assets of domestic associations, June 30, 1916...	12,077,727 54

The aggregate amount invested in real estate mortgages by the domestic associations follows:

June 30, 1913.....	\$7,040,529 42
June 30, 1916.....	10,056,043 76

The foregoing figures do not include the foreign associations whose real estate mortgages in this state amount to almost \$2,000,000.

Very few foreclosures have been made and the real estate held by the associations outside of office buildings is very small.

The loaning rate has decreased to meet the competition of other investors and the prevailing sentiment amongst the associations is to loan their money at the lowest rate possible to enable them to pay a fair return to their members.

Most of the associations do not require the carrying of stock in connection with loans, and do not charge commission on loans.

Some of the associations charge membership fee ranging from 25 cents to \$2 per share, some place the proceeds in their expense fund and others pay it to agents.

I would respectfully recommend:

First. That all agents be licensed to do business in the State of Washington, an annual fee of \$5 be charged for said license and power given the State Auditor to cancel such licenses for violation of the law, or misrepresentations.

Second. That all membership fees pass through the books of the association charging same, and that said membership fees shall not

exceed \$1 per share and the total fee charged any member shall not exceed \$10 and a separate receipt shall be issued for same.

Third. That it shall be unlawful for officers or directors to borrow from the association of which they are such officers or directors or to be interested in real estate on which the association has a mortgage or become owner either directly or indirectly in any real estate upon which the association has a mortgage except with the written consent of three-fourths of the directors.

Fourth. That any person or persons who shall wilfully or knowingly subscribe to or make or cause to be made any false statement or false entry or omit making proper entries in the books of any savings and loan or building and loan association or society, operating under the law of the State of Washington, or shall knowingly subscribe to or exhibit false or fictitious papers, or securities with the intent to deceive any person or persons authorized to examine into the affairs of said association or society, or shall publish any false statement of the amount of the assets or liabilities of any such association or society, shall be deemed guilty of a felony and upon conviction thereof shall be imprisoned in the state penitentiary not less than one year or more than ten years.

Fifth. That section 20, chapter 110, Laws 1913, be amended so as to leave it discretionary with the State Auditor whether or not the twenty days' notice should be given in case of insolvency or unsoundness.

ANNUAL STATEMENTS AT CLOSE OF BUSINESS, JUNE 30, 1916.**Aberdeen Savings and Loan Association, of Aberdeen, Washington.****EUGENE FRANCE, President.****W. W. HART, Secretary.**

Amount of authorized capital.....	\$2,000,000 00
Par value of each share of stock at date of this report.....	\$100 00
Number of shares sold during the year.....	9
Number of shares cancelled and withdrawn during the year.....	27
Number of shares in force at close of year.....	323

RECEIPTS

Cash on hand and in bank July 1, 1915.....	\$8,013 35
Interest	2,609 95
Installment stock	53 00
Loans	10,914 50
Paid-up stock	900 00
Total receipts	\$22,490 80

DISBURSEMENTS

Dividends	\$2,621 40
Expense	538 25
Installment stock	1,291 81
Loans	11,880 00
Commission	9 00
Paid-up stock	2,700 00
T. S. O'Hara (taxes).....	25 53
Real estate (Fidella Rutherford).....	158 03
Cash on hand and in bank.....	3,266 78
Total disbursements	\$22,490 80

ASSETS

Fixtures	\$29 85
Loans	31,844 12
Hayes & Hayes Bankers.....	2,900 12
Cash	366 66
T. S. O'Hara.....	25 53
Real estate	554 47
J. S. Creech.....	11 00
Inventory, delinquent interest.....	971 09
Total assets	\$36,702 84

LIABILITIES

Installment stock	\$2,519 30
Contingent emergency fund.....	808 36
Paid-up stock	32,300 00
Total liabilities	\$36,702 84

American Savings and Loan Association, of Everett, Washington.

H. E. HENDRIX, President.

J. A. WILBURN, Secretary.

Amount of authorized capital.....	\$2,000,000 00
Par value of each share of stock at date of this report.....	\$100 00
Number of shares sold during the year.....	3,165
Number of shares cancelled and withdrawn during the year.....	127
Number of shares in force at close of year.....	3,038

RECEIPTS

Installment stock	\$525 00
Savings stock	4,363 72
Paid-up stock	11,760 00
Juvenile stock	119 05
Membership fee	3,736 70
Payments on real estate loans.....	66 01
Payments on stock loans.....	64 80
Interest	60 73

Total receipts	\$20,696 01
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DISBURSEMENTS

Loans on real estate.....	\$10,699 68
Loans on stock.....	64 80
Withdrawals on savings stock.....	82 00
Membership fee	3,602 95
Furniture and fixtures.....	376 75
Notes receivable	2,300 00
Cash on hand and in banks.....	3,569 83

Total disbursements	\$20,696 01
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ASSETS

Cash on hand and due from banks.....	\$3,569 83
Real estate loans.....	10,633 67
Notes receivable	2,300 00
Furniture and fixtures.....	376 75

Total assets	\$16,880 25
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LIABILITIES

Liabilities to stockholders.....	\$16,685 77
Membership fee	133 75
Undivided profits	60 73

Total liabilities	\$16,880 25
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Cascade Savings and Loan Association, of Everett, Washington.

C. W. WILEY, President.

W. P. BELL, Secretary.

Amount of authorized capital.....	\$2,000,000 00
Par value of each share of stock at date of this report.....	\$100 00
Number of shares sold during the year.....	1,005
Number of shares cancelled and withdrawn during the year.....	None
Number of shares in force at close of year.....	1,005

RECEIPTS

Dues	\$845 00
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DISBURSEMENTS

None.

ASSETS

Cash on hand.....	\$845 00
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LIABILITIES

Liability to stockholders.....	\$845 00
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Citizens Savings and Loan Society, of Spokane, Washington.

EDWARD O'SHEA, President.

R. E. PORTERFIELD, Secretary.

Amount of authorized capital.....	\$2,000,000 00
Par value of each share of stock at date of this report.....	\$100 00
Number of shares sold during the year.....	960
Number of shares cancelled and withdrawn during the year.....	1,392
Number of shares in force at close of year.....	8,987

RECEIPTS

Cash on hand June 30, 1915.....	\$57,785 36
Dues paid by members.....	181,070 39
Loans repaid	86,554 22
Interest collected	31,346 69
Insurance and tax repaid by borrowers.....	4,004 51
Contingent fund	1,638 67
Rents collected	2,757 09
School warrants	5,542 39
Loan fees	855 70
Membership fees	260 00
Examining fees	99 00

Total receipts	\$371,864 02
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DISBURSEMENTS

Withdrawals	\$177,171 47.
Bills payable	10,500 00
Dividends paid to members at 6 per cent per annum.....	27,430 55
Loans	52,579 68
Real estate	37,848 93
Insurance and tax advanced to borrowers.....	10,052 56
Expense	4,108 58
Contingent fund	1,638 67
School warrants	1,959 09
Loan fees	855 70
Membership fees	260 00
Examining fees	68 00
Office furniture	42 25
Cash on hand June 30, 1916.....	47,350 54

Total disbursements	\$371,864 02
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Building, Loan and Savings Associations

9

ASSETS

Cash on hand.....	\$47,350 54
Loans (unpaid balance).....	883,085 58
Office building and other real.....	75,131 15
Office furniture	1,042 25
Insurance and tax.....	17,132 02
Interest	15,657 00
Total assets	\$539,398 54

LIABILITIES

Undivided profits (less expense, \$1,999.13).....	\$16,519 32
Contingent fund	10,958 13
Reserve fund	4,198 73
Examining fees	57 00
Uncompleted loans	3,295 10
Due members	504,370 26
Total liabilities	\$539,398 54

Equitable Building, Loan and Investment Association, of Seattle, Washington.

H. O. SHUEY, President.

W. S. BELL, Secretary.

Amount of authorized capital.....	\$3,000,000 00
Par value of each share of stock at date of this report.....	\$100 00
Number of shares sold during the year.....	562
Number of shares cancelled and withdrawn during the year.....	357
Number of shares in force at close of year.....	1,665

RECEIPTS

On hand July 1, 1915.....	\$3,102 27
Stock	23,857 50
Interest	6,384 97
Stock loans	46,251 75
Real estate loans.....	71,223 27
Real estate	68,150 00
Rents	3,862 50
Total receipts	\$222,332 26

DISBURSEMENTS

Expense	\$1,437 96
Rent account, taxes, repairs and local improvement assessments....	4,354 64
Interest	1,475 25
Stock	22,074 65
Dividends paid (6 per cent).....	5,105 14
Stock loans	35,570 00
Real estate loans.....	89,064 26
Furniture and fixtures.....	200 00
Real estate	59,000 00
Balance on hand.....	4,050 36
Total disbursements	\$222,332 26

ASSETS

Cash	\$4,050 36
Stock loans	33,470 00
Real estate loans.....	\$17,189 27
Real estate sold on contract, carried in loan account..	64,000 00
	<hr/>
	81,189 27
Furniture and fixtures.....	200 00
	<hr/>
Total assets	\$118,909 63

LIABILITIES

Stock	\$102,871 05
Bills payable	15,000 00
Contingent fund	658 58
Undivided profits	380 00
	<hr/>
Total liabilities	\$118,909 63

Receiver appointed November 4, 1916.

Fidelity Savings and Loan Association, of Spokane, Washington.

OTTO W. SPERLING, President.

F. S. McWILLIAMS, Secretary.

Amount of authorized capital.....	\$2,000,000 00
Par value of each share of stock at date of this report.....	\$100 00
Number of shares sold during the year.....	7,622
Number of shares cancelled and withdrawn during the year.....	8,052
Number of shares in force at close of year.....	17,170

RECEIPTS

Cash on hand July 1, 1915.....	\$1,912 30
Bonds and warrants.....	491 62
Penalties on delinquent loans.....	69 65
Real estate loans repaid.....	56,957 48
Dues	249,226 01
Stock loans repaid.....	19,230 00
Membership fees	662 27
Notes payable	12,500 00
Special deposits withdrawn.....	36,127 90
Taxes and insurance.....	5,272 26
Payments on real estate contracts.....	367 65
Interest	32,150 78
Sundries	6,873 23
Rent credited on real estate.....	367 65
	<hr/>
Total receipts	\$422,208 80

DISBURSEMENTS

Bonds and warrants.....	\$7 70
Expense	6,947 33
Furniture and fixtures.....	140 24
Interest	146 72
Withdrawals	162,036 70
Stock loans	19,116 50
Membership fees	252 96

Real estate	\$6,751 98
Notes payable	12,500 00
Special deposit in bank.....	16,127 90
Taxes and insurance.....	5,781 90
Loans on real estate.....	133,592 59
Credit to contingent fund.....	1,125 00
Dividends at 6 per cent.....	20,100 82
Sundries	6,907 61
Cash on hand June 30, 1916.....	30,672 85
<hr/>	
Total disbursements	\$422,208 80

ASSETS

Loans on real estate.....	\$422,948 73
Loans to members on stock.....	9,353 50
Bonds and warrants.....	97 21
Real estate	10,752 91
Taxes and insurance.....	2,475 73
Accrued interest	5,245 34
Real estate contracts.....	8,453 37
Furniture and fixtures.....	1,528 24
Cash on hand.....	30,672 85
<hr/>	
Total assets	\$491,527 88

LIABILITIES

Fully paid shares.....	\$207,400 00
Installment shares	247,486 76
Uncompleted loans	18,064 10
Contingent fund	3,000 00
Membership account	1,160 71
Surplus and undivided profits.....	14,416 31
<hr/>	
Total liabilities	\$491,527 88

**German Savings, Building and Loan Association, of Seattle,
Washington.**

AUGUST MEHLHORN, SR., Vice Pres.	AUGUST MEHLHORN, JR., Sec.
Amount of authorized capital.....	\$2,000,000 00
Par value of each share of stock at date of this report.....	\$100 00
Number of shares in force at close of year.....	1,052

RECEIPTS

Payments on account of loans and rents.....	\$14,074 18
Seattle National Bank (note).....	2,000 00
Overdraft July 1, 1916.....	973 88
<hr/>	
Total receipts	\$17,048 06

DISBURSEMENTS

Expense	\$269 85
Dividends	5,341 98
Repayment account note.....	800 00
Repayments on certificates of stock.....	8,431 40
Taxes, assessments, fire insurance, care of properties.....	1,924 77
Interest on note.....	110 21
Overdraft July 1, 1915.....	169 90
Total disbursements	\$17,048 06

ASSETS

Furniture and fixtures.....	\$42 00
Stationery and printing.....	70 00
Real estate	7,114 85
Stock loans	2,250 00
Real estate loans.....	65,790 51
Total assets	\$75,267 36

LIABILITIES

Overdraft	\$973 88
Note, Seattle National Bank.....	1,200 00
Reserve fund	235 32
Certificates of stock.....	72,858 16
Total liabilities	\$75,267 36

The Home Savings and Loan Association, of Seattle, Washington.

W. V. EDDY, President.

A. E. PIERCE, Secretary.

Amount of authorized capital.....	\$2,000,000 00
Par value of each share of stock at date of this report.....	\$100 00
Number of shares in force at beginning of the year.....	198
Number of shares sold during the year.....	14,891
Number of shares cancelled and withdrawn during the year.....	482
Number of shares in force at close of year.....	14,607

RECEIPTS

Cash on hand July 1, 1915.....	\$492 51
Dues—	
"Class A"	\$13,809 56
"Class B"	5,287 45
"Class C"	7,546 00
Miscellaneous	185 00
	26,778 01
Repayment of real estate loans.....	399 60
Interest on real estate loans.....	316 77
Rentals on real estate owned.....	96 00
Suspense	83 71
Total receipts	\$28,166 60

DISBURSEMENTS

Real estate loans.....		\$17,643 49
Withdrawals—		
"Class A"	\$1,251 36	
"Class B"	100 00	
"Class C"	98 00	
Miscellaneous	2,842 58	
		3,791 94
Expense on real estate owned.....		36 67
General expense		34 00
Suspense		83 71
Cash on hand June 30, 1916.....		6,576 79
Total disbursements		\$28,166 60

ASSETS

Cash	\$6,576 79
Furniture and fixtures.....	100 00
Real estate loans.....	17,656 99
Real estate owned.....	3,751 40
Total assets	\$28,085 18

LIABILITIES

Contingent fund	\$33 80
Dues Account—	
"Class A"	\$12,797 20
"Class B"	5,228 56
"Class C"	7,525 79
Miscellaneous	866 54
	26,418 09
Mortgages on real estate owned.....	1,600 00
Undivided profits	33 79
Total liabilities	\$28,085 18

**Industrial Building and Loan Association, of South Bellingham,
Washington.**

CYRUS GATES, President.

F. D. YALE, Secretary.

Amount of authorized capital.....	\$2,000,000 00
Par value of each share of stock at date of this report.....	\$100 00
Number of shares sold during the year.....	76
Number of shares cancelled and withdrawn during the year.....	48
Number of shares in force at close of year.....	586

RECEIPTS

Cash on hand July 1, 1915.....	\$1,401 99
Membership fees	50 50
Serial stock	1,589 40
Paid-up stock	3,100 00
Installment stock	2,395 70

Loan repaid	\$1,000 00
Real estate payments.....	20 00
Bills payable (bank).....	200 00
Total receipts	\$9,757 59

DISBURSEMENTS

Withdrawal serial stock.....	\$635 00
Withdrawal paid-up stock.....	1,550 00
Loans made, first mortgages.....	3,250 00
Dividends paid on withdrawals.....	1,675 00
Inst. paid	6 85
Expense, total	200 40
Cash on hand.....	2,240 34
Bills payable paid (bank).....	200 00
Total disbursements	\$9,757 59

ASSETS

Cash on hand.....	\$2,240 34
Loans	26,800 00
Accrued interest	778 30
Fines unpaid	22 20
Books and stationery.....	25 00
Total assets	\$29,865 84

LIABILITIES

Serial stock	\$12,909 10
Paid-up stock	8,000 00
Dividend fund	6,379 65
Contingent fund	119 17
Net gain for year.....	2,457 92
Total liabilities	\$29,865 84

**Inland Empire Building and Loan Association, of Walla Walla,
Washington.**

JOHN SMITH, Vice President.

E. E. WRIGHT, Secretary.

Amount of authorized capital.....	\$2,000,000 00
Par value of each share of stock at date of this report.....	\$100 00
Number of shares sold during the year.....	217
Number of shares cancelled and withdrawn during the year.....	229
Number of shares in force at close of year.....	1980 ½

RECEIPTS

Cash on hand July 1, 1915.....	\$821 72
Installment stock	14,157 57
Interest on loans.....	6,470 36
Bonus	69 85
Sundry advances repaid.....	1,531 25
Debenture bonds	551 95

Building, Loan and Savings Associations**15**

Bills payable	\$7,150 00
Stock loans repaid	305 00
Real estate loans repaid	7,673 75
Suspense items	35 90
Real estate contracts	315 00
<hr/>	
Total receipts	\$39,082 35

DISBURSEMENTS

Real estate loans	\$20,662 53
Stock loans	960 00
Withdrawal of stock	5,133 51
Debenture bonds retired	1,983 32
Dividend on paid-up stock	20 00
Interest on bonds	378 86
Interest on bills payable	160 90
Bills payable repaid	7,150 00
Incomplete loans	700 00
Sundry advances	1,089 96
Operating expenses	298 57
State examination	28 00
Suspense account	54 20
Cash on hand July 1, 1916	462 50
<hr/>	
Total disbursements	\$39,082 35

ASSETS

Cash	\$462 50
Furniture and fixtures	100 00
Real estate loans	86,661 21
Stock loans	3,080 00
Sundry advances	15 00
Interest (accrued)	683 94
Real estate contract	860 00
<hr/>	
Total assets	\$91,862 65

LIABILITIES

Installment stock	\$74,842 50
Paid-up stock	540 80
Debenture bonds	13,235 28
Bills payable	1,000 00
Interest (accrued)	365 32
Incomplete loans	600 00
Salary (accrued)	20 00
Surplus	479 46
Reserve	779 29
<hr/>	
Total liabilities	\$91,862 65

**Inter-State Buliding, Loan and Trust Association, of Walla Walla,
Washington.**

F. W. PAINE, President.

BEN G. STONE, Secretary.

Amount of authorized capital.....	\$2,000,000 00
Par value of each share of stock at date of this report.....	\$100 00
Number of shares sold during the year.....	1,174
Number of shares cancelled and withdrawn during the year.....	1,053
Number of shares in force at close of year.....	6,193

RECEIPTS

Cash on hand July 1, 1915.....	\$11,281 55
Regular stock	63,721 48
Interest	20,595 30
Real estate loans.....	7,562 36
Stock loans	7,417 85
Debenture bonds	12,000 00
Insurance and taxes, repaid.....	1,057 75
Total receipts	\$123,636 29

DISBURSEMENTS

Furniture and fixtures.....	\$6 45
Real estate loans.....	85,033 73
Stock loans	17,620 90
Regular stock	41,224 13
Debenture bonds	8,650 00
Interest	4,775 13
Paid-up stock	6,300 00
Insurance and taxes, advanced.....	3,140 06
Expense, including salaries.....	2,779 41
Cash on hand June 30, 1916.....	4,106 48
Total disbursements	\$123,636 29

ASSETS

Cash	\$4,106 48
Real estate loans.....	267,713 78
Stock loans	15,963 07
Furniture and fixtures.....	396 45
Insurance and taxes, advanced.....	6,233 06
Interest due	7,099 62
Total assets	\$301,512 46

LIABILITIES

Regular stock	\$187,254 80
Paid-up stock	57,130 00
Debenture bonds	36,950 00
Contingent fund	12,441 69
Undivided profits	5,431 80
Interest and expense due.....	2,304 17
Total liabilities	\$301,512 46

**Kitsap County Savings and Loan Association, of Bremerton,
Washington.****EDW. J. TAGGART, President.****THOMAS STEVENSON, Secretary.**

Amount of authorized capital.....	\$250,000 00
Par value of each share of stock at date of this report.....	\$100 00

RECEIPTS

Cash June 30, 1915.....	\$5 68
Received on stock subscriptions.....	2,382 26
Repayments on loans.....	12,488 56
Interest on loans.....	1,748 45
Advances	4,582 50
Total receipts	\$21,012 43

DISBURSEMENTS

New loans	\$7,849 90
Shares withdrawn	2,142 09
Bank loan repaid.....	4,725 00
Interest on loan repaid.....	84 98
Payment to secretary.....	48 55
Dividends on Div. "B".....	175 88
State audit	21 75
Annual license	10 00
Annual premium on bonds.....	10 00
Accounting	161 45
Advances	7 50
Advertising	44 25
Cash on hand.....	5,871 68
Total disbursements	\$21,102 43

ASSETS

Mortgages	\$11,603 18
Accrued interest	22 20
Cash	5,871 68
Total assets	\$17,497 06

LIABILITIES

To shareholders	\$16,478 41
Contingent fund	187 28
Undivided profits	674 87
Account payable	156 50
Total liabilities	\$17,497 06

Modern Savings and Loan Association, of Tacoma, Washington.

C. D. MURDOCH, Vice President.

F. H. ATCHINSON, Secretary.

Amount of authorized capital.....	\$2,000,000 00
Par value of each share of stock at date of this report.....	\$100 00
Number of shares sold during the year.....	344
Number of shares cancelled and withdrawn during the year.....	206
Number of shares in force at close of year.....	1,215

RECEIPTS

On stock	\$9,901 12
On loans	5,450 04
For interest	2,306 82
For bills payable.....	4,550 00
Sundries	51 05
Total receipts	\$22,259 03

DISBURSEMENTS

Stock	\$3,880 04
Loans	12,972 30
Interest	86 17
Fees to state.....	66 50
General expenses and salaries.....	174 58
Rent	60 00
Cash dividends	1,142 28
Bills payable	1,300 00
Sundries	119 33
Total disbursements	\$19,751 20

ASSETS

Cash	\$4,025 87
Accrued interest	2,147 70
Loans	37,461 64
Real estate	1,934 61
Office furniture and supplies.....	43 75
Personal accounts	57 10
Total assets	\$45,670 67

LIABILITIES

Stock	\$41,236 21
Bills payable	3,250 00
Dividends due July 1, 1916.....	749 70
Contingent fund	418 31
Personal account	30
Surplus	16 15
Total liabilities	\$45,670 67

Mutual Savings and Loan Association, of Seattle, Washington.

J. G. PRICE, Vice President.

CHARLES DIELMAN, Secretary.

Amount of authorized capital.....	\$2,000,000 00
Par value of each share of stock at date of this report.....	\$100 00
Number of shares sold during the year.....	25
Withdrawn during the year.....	\$3,721 29
Shares in force at close of year.....	\$6,454 58

RECEIPTS

July 1, 1915, cash on hand and in bank.....	\$1,091 10
Received on shares.....	2,366 87
Interest on real estate loans.....	620 29
Repayments on real estate loans.....	2,156 14
Loan expenses	42 00
Bills payable	600 00
Total receipts	\$6,876 40

DISBURSEMENTS

Withdrawals	\$3,721 29
Paid to borrowers.....	2,111 23
Expenses—State license, rent, salary, printing, state league dues, surety bond, postage, advertising and stationery.....	174 76
Loan expense	32 00
Dividends	419 69
Total disbursements	\$6,458 97

ASSETS

Balance due on real estate loans.....	\$6,722 97
Cash on hand and in bank.....	417 43
Total assets	\$7,140 40

LIABILITIES

Due members on shares.....	\$6,454 58
Profit and loss.....	40 82
Bills payable	600 00
Contingent fund	45 00
Total liabilities	\$7,140 40

**New Whatcom Building and Loan Association, of Bellingham,
Washington.**

GEO. E. GAGE, President.

THOS. B. COLE, Secretary.

Amount of authorized capital.....	\$1,000,000 00
Par value of each share of stock at date of this report.....	\$100 00
Number of shares sold during the year.....	213
Number of shares cancelled and withdrawn during the year.....	327
Number of shares in force at close of year.....	1,159

RECEIPTS

Cash on hand July 1, 1915.....	\$618 96
Dues	4,010 00
Interest	5,930 65
Delinquent items	4,472 98
Items paid in advance.....	182 06
Loans repaid	24,876 74
Savings stock sold.....	8,050 00
Bills payable	6,000 00
Payments on insurance advanced.....	72 50
Total receipts	\$54,213 89

DISBURSEMENTS

Loans on real estate.....	\$23,200 00
Expense	455 53
Salary	840 00
Advanced items transferred.....	179 31
Delinquent items	3,072 34
Insurance premiums advanced.....	76 20
Withdrawals paid	12,354 00
Interest on withdrawals.....	4,757 47
Interest on borrowed money.....	164 01
Bills payable	4,500 00
Cash on hand and in bank.....	4,615 03
Total disbursements	\$54,213 89

ASSETS

Safe	\$150 00
Loans on real estate.....	65,637 48
Delinquent dues	726 50
Delinquent interest	500 22
Insurance premium advanced.....	26 20
Cash on hand and in bank.....	4,615 03
Total assets	\$71,655 41

LIABILITIES

Serial stock	\$20,009 50
Savings stock	28,200 00
Items paid in advance.....	49 90
Dividend account	15,912 37
Fund for contingent losses.....	2,421 52
Undivided profit	62 12
Bills payable	5,000 00
Total liabilities	\$71,655 41

Northwestern Building and Loan Association, of Tacoma, Washington.

H. G. WILLIAMS, President.

C. L. ROBERTS, Secretary.

Amount of authorized capital.....	\$5,000,000 00
Par value of each share of stock at date of this report.....	\$100 00
Number of shares sold during the year.....	1,108
Number of shares cancelled and withdrawn during the year.....	911
Number of shares in force at close of year.....	2,360

RECEIPTS

Cash on hand July 1, 1915.....	\$4,625 72
Real estate loans.....	22,931 30
"A" stock	3,225 40
"B" stock	11,525 02
"C" stock	25,500 00
"D" stock	81 50
Membership fees	5 00
Expense (rentals)	88 41
Bills payable	19,800 00
Stock loans	1,175 00
Interest	12 74
Debenture bonds	1,000 00
Exchange checks	1,518 46
Total receipts	\$91,488 55

DISBURSEMENTS

Real estate loans.....	\$43,332 55
"A" stock	696 85
"B" stock	6,491 11
"C" stock	2,357 58
Real estate expense (taxes).....	19 87
Bills payable	25,000 00
Stock loan	3,740 00
Exchange checks	1,518 46
Interest	442 68
Expense	1,942 11
Cash on hand.....	5,947 34
Total disbursements	\$91,488 55

ASSETS

Cash on hand.....	\$5,947 34
Real estate loans, advances and interest.....	80,010 83
Stock loans	100 00
Real estate	804 73
Furniture and fixtures.....	250 00
Undivided profit deficit.....	143 82
Total assets	\$87,256 72

LIABILITIES

"A" stock	\$5,029 91
"B" stock	30,870 43
"C" stock	48,349 56
"D" stock	134 68

Building, Loan and Savings Associations

venture bonds	\$1,000 00
erest on same.....	22 67
omplete loans	47 90
ls payable	800 00
erest on same.....	18 40
ntingent fund	988 17
Total liabilities	\$87,256 72

Olympia Building and Loan Association, of Olympia, Washington.

C. H. SPRINGER, President.

WALTER F. McDOWELL, Secretary.

ount of authorized capital.....	\$2,000,000 00
r value of each share of stock at date of this report.....	\$100 00
umber of shares sold during the year.....	4,461
umber of shares cancelled and withdrawn during the year.....	1,630 $\frac{1}{4}$
umber of shares in force at close of year.....	9,353 $\frac{3}{4}$

RECEIPTS

sh in bank July 1, 1915.....	\$16,520 88
ld-up stock	58,475 00
ving stock	120,599 29
stallment stock	11,600 01
venile stock	476 65
venile stock (school savings).....	1,103 84
rtgage loans repaid.....	102,674 90
ck loans repaid.....	8,173 00
rrants (Thurston county).....	2,644 79
orrowed money	7,000 00
erest	24,920 17
mbership fees	2,314 50
orney fees	242 50
raisal fees	171 00
al estate (rentals from home office site).....	880 00
es, etc., repaid by borrowers	266 48
an balances (construction loan account).....	4,246 15
Total receipts	\$362,309 11

DISBURSEMENTS

st mortgage loans.....	\$231,625 00
ans on Association stock.....	15,127 52
an balances (construction loan account).....	2,437 36
thdrawals of paid-up stock.....	19,425 00
thdrawals of savings stock.....	32,180 47
thdrawals of installment stock.....	11,067 06
thdrawals of juvenile stock.....	367 80
thdrawals of juvenile stock (school savings bank).....	386 00
al estate (home office site).....	672 64
ls payable (mortgage on home office site).....	5,000 00
es, assessments, etc., paid for borrowers.....	1,554 41
orrowed money	7,000 00
erest on borrowed money.....	25 41
rrants (Thurston county).....	2,644 79
ulture and fixtures.....	141 30

Building, Loan and Savings Associations**23**

Profit and loss (rebates of interest overpaid).....	\$40 07
Expenses	3,842 74
Attorney fees	242 50
Appraisers' fees	171 00
Dividends	21,750 21
Cash in bank June 30, 1918.....	7,107 83
<hr/>	
Total disbursements	\$362,309 11

ASSETS

Cash in bank.....	\$7,107 83
First mortgage loans (net amount due).....	862,271 11
Loans on Association stock.....	13,711 20
Real estate (home office site).....	7,250 00
Taxes and assessments paid for borrowers.....	1,287 93
Furniture and fixtures.....	900 00
<hr/>	
Total assets	\$392,528 07
Due members on paid-up shares.....	\$221,450 00
Due members on savings shares.....	142,566 35
Due members on installment shares.....	17,923 49
Due members on juvenile shares.....	750 70
Due members on juvenile shares (school savings bank).....	1,821 26
Due borrowers on construction loans.....	4,236 15
Contingent fund	2,512 41
Reserve fund	1,267 71
<hr/>	
Total liabilities	\$392,528 07

Pacific Building and Loan Association, of Tacoma, Washington.**ORVILLE BILLINGS, President.****A. E. ROTHERMEL, Secretary.**

Amount of authorized capital.....	\$20,000,000 00
Par value of each share of stock at date of this report.....	\$100 00
Number of shares sold during the year.....	43,630
Number of shares cancelled and withdrawn during the year.....	10,685
Number of shares in force at close of year.....	115,491

RECEIPTS

Dues	\$310,593 14
Real estate loan, principal.....	179,482 54
Real estate loan, interest.....	71,907 87
Stock loans, principal.....	16,905 00
Stock loans, interest.....	1,421 34
Real estate contracts.....	408 32
Real estate rents.....	1,039 50
Advance on loans.....	1,667 92
Suspense	10,715 16
Bills payable	29,500 00
Accounts receivable	896 65
Miscellaneous	715 64
<hr/>	
Total receipts	\$625,253 08

DISBURSEMENTS

Real estate loans.....	\$883,935 39
Advance on real estate loans.....	7,265 27
Stock loans	30,541 92
Withdrawals	147,856 80
Advance dues	2,603 39
Suspense	9,085 23
Accounts receivable	803 63
Furniture and fixtures.....	856 50
Real estate	334 76
Profit and loss.....	98 97
Collection commissions	3,744 17
Salaries	5,941 67
Printing and stationery.....	1,697 76
Telephone, telegraph and postage.....	1,174 85
Miscellaneous operation expense.....	8,004 51
Loan expense	3,512 04
General expense	394 23
Real estate taxes and expense.....	1,083 69
Bills payable	29,500 00
Bills payable, interest.....	79 78
Miscellaneous	111 55
Total disbursements	\$638,626 11

ASSETS

Real estate loans.....	\$854,288 81
Stock loans	44,127 22
Advance on real estate loans.....	8,061 32
Real estate	17,186 88
Real estate sold under contracts.....	3,165 66
Accounts receivable	701 00
Furniture and fixtures.....	3,607 81
Accrued interest on real estate loans.....	6,469 48
Accrued interest on stock loans.....	3,411 43
Cash	3,055 65
Total assets	\$944,075 26

LIABILITIES

Liability to members.....	\$889,229 64
Uncompleted loans	20,781 97
Contingent fund	5,178 92
Suspense	1,024 23
Undivided profits	27,860 50
Total liabilities	\$944,075 26

Prudential Savings and Loan Association, of Seattle, Washington.

G. E. TILTON, President.

F. E. DINGLEY, Secretary.

Amount of authorized capital.....	\$2,000,000 00
Par value of each share of stock at date of this report.....	\$100 00
Number of shares sold during the year.....	1,746
Number of shares cancelled and withdrawn during the year.....	10
Number of shares in force at close of year.....	1,736

RECEIPTS

Installment stock	\$4,715 14
Interest on loans.....	5 00
Payments on real estate loans.....	4 10
Total receipts	\$4,724 24

DISBURSEMENTS

Real estate loans.....	\$1,100 00
Withdrawals	70 00
Cash on hand June 30, 1916.....	\$3,554 24
Total disbursements	\$4,724 24

ASSETS

Real estate loans.....	\$1,095 90
Cash	3,554 24
Total assets	\$4,650 14

LIABILITIES

Due to members.....	\$4,645 14
Interest	5 00
Total liabilities	\$4,650 14

Puget Sound Savings and Loan Association, of Seattle, Washington.

ADOLPH F. LINDEN, Vice President.

R. CAMPBELL, Secretary.

Amount of authorized capital.....	\$2,000,000 00
Par value of each share of stock at date of this report.....	\$100 00

RECEIPTS

Expense	\$2,372 55
Savings shares	596,814 89
Fully paid shares.....	18,310 00
Installment stock	8,281 88
Insurance	288 48
Undivided profits	189 03
Interest	73,680 95
Real estate loans.....	218,774 86

Stock loans	\$25,306 31
Real estate contracts.....	2,844 39
Taxes and insurance advanced.....	5,199 14
Bonds and warrants.....	87,672 64
Balance carried from June 30, 1915.....	81,874 20
Total receipts	\$1,121,609 32

DISBURSEMENTS

Expense	\$18,993 06
Savings shares	305,825 91
Fully paid shares	5,966 59
Installment stock	52,439 02
Class "B" stock.....	6,853 86
Undivided profits	763 81
Real estate loans.....	485,635 57
Stock loans	30,499 61
Incomplete loans	13,235 04
Taxes and insurance advanced.....	11,119 72
Bonds and warrants.....	116,910 35
Insurance	229 21
Interest	1,499 50
Real estate contracts.....	5,700 00
Sundry account	909 37
Balance on hand June 30, 1916.....	65,029 20
Total disbursements	\$1,121,609 32

ASSETS .

Real estate loans.....	\$905,479 54
Stock loans	10,612 10
Real estate sold under contract.....	14,662 71
Real estate	2,504 04
Interest due and accrued.....	12,474 10
Taxes and insurance advanced.....	8,174 01
Furniture and fixtures.....	2,083 49
Bonds and warrants.....	29,251 75
Cash on hand.....	65,029 20
Total assets	\$1,050,270 94

LIABILITIES

Installment stock	\$109,215 85
"B" stock	5,318 78
Fully paid stock.....	39,063 20
Savings stock	849,162 29
Undivided profits	30,361 41
Incomplete loans	11,997 39
Insurance	115 78
Contingent fund	5,036 24
Total liabilities	\$1,050,270 94

Pullman Savings and Loan Association, of Pullman, Washington.

J. N. EMERSON, President.

M. K. SNYDER, Secretary.

Amount of authorized capital.....	\$400,000 00
Par value of each share of stock at date of this report.....	\$100 00
Number of shares sold during the year ("A" 787, "D" 856.2).....	1,093.2
Number of shares cancelled and withdrawn during the year ("A" 538.5, "D" 125.5).....	662
Number of shares in force at close of year.....	3,385

RECEIPTS

Cash on hand July 1, 1915.....	\$5,740 87
Dues on "A" stock collected.....	32,154 06
Interest received on loans and balances.....	18,560 82
Fees and fines collected.....	471 08
Real estate loans paid.....	38,125 84
Stock loans paid.....	6,585 65
Loan fees collected.....	251 56
Fully paid stock ("D") sold.....	35,620 00
Notes and bonds issued.....	20,500 00
Rentals received from real estate.....	119 90
Insurance premiums paid.....	180 00
Suspense items received.....	2,706 10
Miscellaneous items	29 06
Total receipts	\$155,994 94

DISBURSEMENTS

Real estate loans issued.....	\$59,479 00
Stock loans issued.....	6,987 00
Maturity of "A" stock paid.....	17,700 00
Withdrawals of "A" stock.....	15,739 96
Cancellation fully paid ("D") stock.....	12,550 00
Notes and bonds paid.....	21,900 00
Cash dividends paid on "D" stock.....	8,645 06
Interest paid on notes and bonds.....	679 57
Loan fees disbursed.....	315 11
Expenses	972 55
Insurance collected	130 00
Taxes, and assessments on real estate.....	103 35
Advances on real estate loans, taxes.....	253 41
Suspense items disbursed.....	2,733 91
Cash on hand June 30, 1916.....	12,806 02
Total disbursements	\$155,994 94

ASSETS

Real estate loans outstanding.....	\$158,361 15
Advances on real estate loans.....	328 41
Stock loans outstanding.....	6,894 95
Real estate	955 28
Interest due on loans (unpaid).....	818 45
Cash on hand June 30, 1916.....	12,806 02
Total assets	\$180,164 26

LIABILITIES

2,522 shares "A" stock.....	\$87,278 54
813 shares "D" stock.....	81,300 00
Notes and bonds	3,500 00
Contingent fund	1,525 00
Interest accrued on notes and bonds.....	90 08
Undivided profit	6,520 64
Total liabilities	\$180,164 26

Savings and Loan Association, of Bellingham, Washington.

JOHN McCUSH, President.

ROLAND G. GAMWELL, Secretary.

Amount of authorized capital.....	\$2,000,000 00
Par value of each share of stock at date of this report.....	\$100 00
Number of shares sold during the year.....	15
Number of shares cancelled and withdrawn during the year.....	None
Number of shares in force at close of year.....	4,071

RECEIPTS

Installments on stock.....	\$3,649 19
Interest	995 04
Loans repaid	\$1,751 30
Tax certificates	822 19
	<u>2,573 49</u>
Expense refunded	15 00
Bank balance	35 56
Total receipts	\$7,268 28

DISBURSEMENTS

Withdrawals, payments on stock.....	\$3,338 40
Dividends	849 45
Loans	1,174 06
Tax certificates	582 52
Contingent fund	30 25
Expense	405 50
Discount	8 00
Bank balance	880 10
Total disbursements	\$7,268 28

ASSETS

Loans	\$16,437 04
Stationery and printing.....	2 00
Organization	12 00
Bank balance	880 10
Total assets	\$17,331 14

LIABILITIES

Deposits	\$16,968 84
Undivided profits	265 52
Contingent fund	96 78
<hr/>	
Total liabilities	\$17,331 14

**Scandinavian American Savings and Loan Association, of Everett,
Washington.**

JOHN NORMAN, President.

J. C. HEDBERG, Secretary.

Amount of authorized capital.....	\$2,500,000 00
Par value of each share of stock at date of this report.....	\$100 00
Number of shares sold during the year.....	529
Number of shares cancelled and withdrawn during the year.....	None
Number of shares in force at close of year.....	529

RECEIPTS

Membership fee	\$903 00
Dues	275 50
<hr/>	
Total receipts	\$1,178 50

DISBURSEMENTS

Expenses paid from membership fee.....	\$729 10
Balance June 30, 1916.....	449 40
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Total disbursements	\$1,178 50

ASSETS

Balance in treasury.....	\$449 40
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LIABILITIES

Due stockholders	\$275 50
Membership fee account	173 90
<hr/>	
Total liabilities	\$449 40

Seattle Savings and Loan Association, of Seattle, Washington.

L. E. KIRKPATRICK, President.

EDWIN S. EVES, Secretary.

Amount of authorized capital.....	\$2,000,000 00
Par value of each share of stock at date of this report.....	\$100 00
Number of shares sold during the year.....	1,151
Number of shares cancelled and withdrawn during the year.....	None
Number of shares in force at close of year.....	1,151

RECEIPTS

Receipts from sale of shares apportioned to loan fund.....	\$1,170 00
Payments on loans.....	23 00
Earnings for Association.....	20 03
Due to expense fund.....	45 86
Total receipts	\$1,258 89

DISBURSEMENTS

Real estate loans.....	\$600 00
Total disbursements	\$600 00

ASSETS

Real estate loans.....	\$600 00
Cash on hand and in bank.....	658 89
Total assets	\$1,258 89

LIABILITIES

Due stockholders	\$1,258 89
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Securly Savings and Loan Society, of Aberdeen, Washington.**ANDREW REID, President.****FRANK G. JONES, Secretary.**

Amount of authorized capital.....	\$2,000,000 00
Par value of each share of stock at date of this report.....	\$100 00
Number of shares sold during the year.....	276
Number of shares cancelled and withdrawn during the year.....	None
Number of shares in force at close of year.....	276

RECEIPTS

Receipts from payments on stock.....	\$490 50
Total receipts	\$490 50

DISBURSEMENTS

Secretary of state, incorporation fees.....	\$35 00
Mr. Holden, organizer.....	137 50
Trip to Olympia, Jones and Reid.....	10 7Q
Building and Loan News.....	2 00
Savings and Loan Manual.....	3 50
Advertising matter, Aberdeen Printing Company.....	26 80
Pass books, Welsh-Richards.....	24 50
Application blanks and advertising, G. H. Pub. Co.....	63 75
Certificate, Quick Print Co.....	22 50
Letter window, Aberdeen Paint Co.....	9 00
For soliciting, Mr. Ochler.....	22 00

Building, Loan and Savings Associations

31

For seal and books, Benson Supply Co.....	\$4 05
For postage	1 29
Commissions	7 50

Total disbursements	\$869 59
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ASSETS

Cash	\$120 91
Total assets	\$120 91

LIABILITIES

Liability to shareholders.....	\$120 91
Total liabilities	\$120 91

Skagit County Savings and Loan Association, of Anacortes, Washington.

E. C. KAUNE, President.

W. H. McCALLUM, Secretary.

Amount of authorized capital.....	\$1,000,000 00
Par value of each share of stock at date of this report.....	\$100 00
Number of shares sold during the year.....	352
Number of shares cancelled and withdrawn during the year.....	None
Number of shares in force at close of year.....	352

RECEIPTS

Receipts from sale of stock.....	\$1,047 18
Total receipts	\$1,047 18

DISBURSEMENTS

Real estate loan.....	\$800 00
Promotion expense (membership fee).....	610 00
Cash on hand June 30, 1916.....	137 18
Total disbursements	\$1,047 18

ASSETS

Loans, real estate.....	\$800 00
Cash on hand.....	137 18
Total assets	\$437 18

LIABILITIES

Liability to stockholders.....	\$343 18
Accounts payable	94 00
Total liabilities	\$437 18

Spokane Savings and Loan Society, of Spokane, Washington.**E. D. OLMSTED, President.****J. L. COOPER, Secretary.**

Amount of authorized capital.....	\$2,000,000 00
Par value of each share of stock at date of this report.....	\$100 00
Number of shares sold during the year.....	5,018.5
Number of shares cancelled and withdrawn during the year.....	3,402.3
Number of shares in force at close of year.....	7,211.2

RECEIPTS

Real estate loans.....	\$111,466 42
Stock loans	4,607 17
Class "A" stock.....	1,068 82
Unmatured stock	15,516 66
Pass book matured stock.....	484,523 65
Time certificate stock.....	750 00
Real estate	382 50
Real estate contracts.....	52 50
Interest	45,052 84
Bills payable	5,000 00
Sundries	136 00
Rent	1,349 04
Furniture and equipment.....	75 00
Advances on loans.....	4,080 19
Loan expenses	1,745 30
Cash on hand July 1, 1915.....	10,160 51
Total receipts	\$685,961 65

DISBURSEMENTS

Real estate loans.....	\$178,266 16
Stock loans	10,143 00
Class "A" stock.....	2,039 18
Unmatured stock	20,304 35
Pass book matured stock.....	312,610 05
Time certificate stock.....	4,883 75
Class "D" stock.....	300 00
Matured stock	100 00
Real estate	56,454 83
Interest	283 53
Dividends on stock.....	82,034 18
Bills payable	30,000 00
Sundries	71 35
Furniture and equipment.....	508 65
Advances on loans.....	6,298 10
Loan expenses	1,845 70
Withdrawal certificates	22 50
Expense	9,639 89
Cash on hand June 30, 1916.....	20,161 93
Total disbursements	\$685,961 65

ASSETS

Interest receivable	\$12,800 00
Furniture and equipment.....	8,000 00
Real estate loans.....	652,752 14
Stock loans	8,749 65
Office building and other real estate.....	97,525 16
Real estate contracts	6,407 48
Advances on loans.....	10,528 68
Cash	20,161 93
Loan expenses	16 40
Total assets	\$811,941 44

LIABILITIES

Loan expense	\$113 50
Mortgages payable	37,000 00
Incomplete loans	27,057 46
Undivided profits	18,046 96
Reserve	8,600 00
Savings stock	721,123 52
Total liabilities	\$811,941 44

State Building and Loan Association, of Tacoma, Washington.

L. E. PASKILL, President.

GEO. RUSSELL, Secretary.

Amount of authorized capital.....	\$8,000,000 00
Par value of each share of stock at date of this report.....	\$100 00
Number of shares sold during the year.....	18,293
Number of shares cancelled and withdrawn during the year.....	1,842
Number of shares in force at close of year.....	38,677

RECEIPTS

Cash on hand July 1, 1915.....	\$6,180 84
Dues	128,487 99
Real estate loans.....	26,827 31
Stock loans	737 50
Interest on loans.....	10,484 82
Bills payable	2,000 00
Expense rebate	6,430 84
Exchange checks	567 58
Real estate rent.....	176 00
Accounts receivable	80 00
Suspense	672 68
General	845 56
Total receipts	\$182,991 12

DISBURSEMENTS

Real estate loans.....	\$136,458 19
Stock loans	4,216 65
Bills payable	5,000 00
Operating expenses	6,017 05
Collection commissions	896 89
Interest on bills payable.....	35 00
Furniture and fixtures.....	1,892 31
Withdrawals	19,701 48
Dividends on fully paid shares.....	2,948 15
Exchange checks	567 58
Advanced taxes and insurance.....	329 33
Accounts receivable	185 30
Suspense	292 08
Real estate	276 50
General	261 72
Cash on hand June 30, 1916.....	3,912 56
Total disbursements	\$182,991 12

ASSETS

Real estate loans.....	\$189,678 26
Real estate	2,357 81
Advanced taxes and insurance.....	353 84
Stock loans	3,890 35
Accrued interest	4,381 27
Furniture and fixtures.....	2,602 86
Suspense	36 98
Accounts receivable	546 09
Cash on hand June 30, 1916.....	3,912 56
Total assets	\$207,760 02

LIABILITIES

Liability to shareholders.....	\$189,230 44
Contingent fund	732 81
Uncompleted loans	276 15
Undivided profits	7,520 62
Total liabilities	\$207,760 02

Tacoma Savings and Loan Association, of Tacoma, Washington.

ALFRED LISTER, President.

WM. P. HOPPING, Secretary.

Amount of authorized capital.....	\$2,000,000 00
Par value of each share of stock at date of this report.....	\$100 00
Number of shares sold during the year.....	1,848
Number of shares cancelled and withdrawn during the year.....	2,250
Number of shares in force at close of year.....	14,935

RECEIPTS

Cash on hand June 30, 1915.....	\$12,083 28
Dues	89,945 50
Interest	50,380 89
Entrance fees	473 50
Fines	928 32
Payments on real estate loans.....	64,676 64
Payments on real estate contracts.....	433 55
Payments on real estate.....	367 95
Payments on stock loans.....	20,160 00
Accrued interest	130 58
Transfer fees	41 30
Bills payable	12,000 00
Bonds	38,500 00
Total receipts	\$285,121 51

DISBURSEMENTS

Matured stock—366 shares Series "R".....	\$38,228 70
Matured stock—160 shares Series "S".....	17,070 40
Matured stock—102 shares Series "T".....	10,262 22
Matured stock—170 shares Series "U".....	17,000 00
Withdrawals	35,637 83
Loaned on real estate.....	75,815 05
Loaned on stock.....	17,679 00
Real estate	858 47
Discount on advance payments.....	156 10
Entrance fees	473 50
Expense, salary, etc.....	4,201 17
Supplies, furniture and fixtures.....	234 80
Interest on bonds and bills payable.....	5,252 56
Bonds	32,800 00
Bills payable	12,000 00
Cash on hand June 30, 1916.....	17,956 71
Total disbursements	\$285,121 51

ASSETS

Loaned on real estate.....	\$490,108 76
Real estate	14,945 10
Real estate contracts.....	5,717 48
Loaned on stock.....	28,676 00
Office furniture and fixtures.....	1,094 15
Unearned discounts	29 24
Dues	6,384 50
Interest and fines.....	9,587 45
Cash on hand June 30, 1916.....	17,956 71
Total assets	\$574,499 34

LIABILITIES

Paid on dues, 14,935 shares of stock.....	\$348,060 00
Advance dues	2,507 50
Advance interest	55 48
Bonds outstanding	85,400 00

Interest on bonds, June 30, 1916.....	\$2,562 00
Incomplete loans	2,474 46
Contingent fund	7,657 65
Profits apportioned	125,782 25
Total liabilities	\$574,499 34

United States Savings and Loan Society, of Tacoma, Washington.

E. J. WALSH, President.

J. G. MARCH, Secretary.

Amount of authorized capital.....	\$5,000,000 00
Par value of each share of stock at date of this report.....	\$100 00
Number of shares sold during the year.....	912
Number of shares cancelled and withdrawn during the year.....	None
Number of shares in force at close of year.....	912

RECEIPTS

Cash on hand.....	.....
Stock, installment	125 00
Stock, fully paid.....	1,400 00
Loans	9 09
Interest	9 17
Membership fees	692 00
Loan expense	19 50
Advanced by secretary.....	11 74
Total receipts	\$2,266 50

DISBURSEMENTS

Real estate loans.....	\$1,700 00
Membership fees	550 25
Loan expense	16 25
Total disbursements	\$2,266 50

ASSETS

Loans	\$1,690 91
Total assets	\$1,690 91

LIABILITIES

Stock	\$1,525 00
Undivided profits	9 17
Membership fees	145 00
Advance by secretary.....	11 74
Total liabilities	\$1,690 91

Washington Savings and Loan Association, of Seattle, Washington.

RAYMOND R. FRAZIER, President.

H. D. CAMPBELL, Secretary.

Authorized capital	\$8,000,000 00
Par value of shares	\$100 00

RECEIPTS

Cash on hand and in banks June 30, 1915	\$320,546 08
Payments on stock	8,553,121 02
Interest and exchange	345,486 09
Real estate loan payments	1,615,988 58
Stock loan payments	55,000 37
Bonds and warrants	244,110 52
Total receipts	\$6,134,202 61

DISBURSEMENTS

Real estate loans	\$2,196,758 02
Stock loans	53,958 97
Withdrawal of stock	2,635,806 37
Bonds and warrants	365,276 51
Office furniture and fixtures	3,159 27
Expense	59,826 99
Dividends	250,383 96
Cash on hand and in banks June 30, 1916	569,082 52
Total disbursements	\$6,134,202 61

ASSETS

Real estate loans	\$4,686,127 85
Bonds and warrants	414,032 93
Real estate owned	8,233 82
Real estate sold under contract	33,996 15
Furniture and fixtures	3,500 00
Accrued interest	40,718 81
Cash on hand and in banks	569,082 52
Total assets	\$5,755,641 58

LIABILITIES

Due members of Association on certificates and pass books	\$5,610,511 21
Due borrowers on construction loans	13,142 77
Reserve and undivided profits fund	131,987 60
Total liabilities	\$5,755,641 58

West Coast Savings and Loan Association, of Centralia, Washington.**T. H. McCLEARY, President.****GEO. L. BARNER, Secretary.**

Amount of authorized capital.....	\$2,000,000 00
Par value of each share of stock at date of this report.....	\$100 00
Number of shares sold during the year.....	442
Number of shares cancelled and withdrawn during the year.....	50
Number of shares in force at close of year.....	392

RECEIPTS

Deposits on all classes of stock.....	\$1,027 50
Total receipts	\$1,027 50

DISBURSEMENTS

Real estate loans.....	\$300 00
Membership fees, for all expenses.....	594 00
Cash in bank June 30, 1916.....	133 50
Total disbursements	\$1,027 50

ASSETS

First mortgage loan on real estate (made June, 1916).....	\$300 00
Cash in bank.....	133 50
Total assets	\$433 50

LIABILITIES

Deposits on all classes of stock, due members.....	\$433 50
Total liabilities	\$433 50

The Yakima Savings and Loan Association, of North Yakima, Washington.**E. O. KECK, President.****LOGAN H. ROBERTS, Secretary.**

Amount of authorized capital.....	\$2,000,000 00
Par value of each share of stock at date of this report,.....	\$100 00

RECEIPTS

Cash balance July 1, 1915.....	\$6,821 77
Payments on shares.....	24,359 06
Payments on loans and advances.....	47,755 14
Payments on real estate contracts.....	90 82
Interest on loans and advances.....	12,900 09
Rentals from real estate.....	927 50
Bills payable	5,500 00
Total receipts	\$97,858 88

DISBURSEMENTS

Loans	\$41,887 20
Advances	8,242 33
Withdrawals	31,690 02
Dividends	6,636 15
Expense	1,863 82
Real estate	469 88
Fixtures	57 45
Bills payable	5,500 00
Interest on bills payable.....	40 00
Cash balance June 30, 1916.....	6,967 03
Total disbursements	\$97,853 88

ASSETS

Cash on hand June 30, 1916.....	\$6,967 03
Real estate loans.....	140,792 25
Loans on shares.....	3,300 00
Advances	5,346 37
Real estate	9,000 00
Real estate sold on contract.....	4,409 68
Bills receivable	33 84
Furniture and fixtures.....	250 00
Accrued interest unpaid.....	2,000 00
Total assets	\$172,098 67

LIABILITIES

Liability to shareholders.....	\$155,272 73
Contingent fund	6,500 00
Rentals carried in suspense.....	527 05
Undivided profits, June 30, 1916.....	9,798 89
Total liabilities	\$172,098 67

Equitable Savings and Loan Association, of Portland, Oregon.

EDWARD COOKINGHAM, Vice President. F. McKERCHER, Secretary.

Amount of authorized capital.....	\$10,000,000 00
Par value of each share of stock at date of this report.....	\$100 00
Number of shares sold during the year.....	29,491
Number of shares cancelled and withdrawn during the year.....	15,262
Number of shares in force at close of year.....	97,792

RECEIPTS

Cash on hand June 30, 1915.....	\$149,741 65
Investment stock	545,990 66
Loans paid on real estate (net).....	717,808 44
Insurance and taxes advanced.....	6,195 63
Interest and profits.....	209,535 69

Real estate (reserve fund).....	\$41,172 33
Individual and other accounts.....	964 88
Loans paid on Association shares.....	53,050 15

Total receipts\$1,724,459 43

DISBURSEMENTS

Loans on real estate.....	\$894,275 52
Bond account	88,771 30
Loans on Association shares.....	49,888 47
Investment withdrawals	278,897 73
Interest and dividends.....	122,240 97
Reserve fund real estate.....	64,625 52
Insurance and taxes advanced.....	15,224 80
Furniture and fixtures.....	286 65
Collection and exchange.....	8,552 89
Postage, telegrams and express.....	1,818 33
Rent and office expense.....	4,666 32
Stationery and printing.....	1,814 95
Salaries	25,792 75
Advertising	582 07
Withdrawal rebates	1,548 51
Sundry expenses	2,549 43
Individual and other accounts.....	1,558 45
Cash on hand.....	161,364 77

Total disbursements\$1,724,459 43

ASSETS

Real estate loans.....	\$3,102,975 00
Bond account	88,771 30
Loans on Association stock.....	93,060 67
Real estate (reserve fund).....	122,941 56
Taxes and insurance advanced.....	16,871 84
Furniture and fixtures.....	2,087 62
Cash on hand.....	161,364 77
Other accounts	136 00

Total assets\$3,588,208 76

LIABILITIES

Investment fund	\$3,800,441 64
Due on loans closed.....	11,426 91
Maturity dividend fund.....	59,309 78
Reserve fund and surplus.....	216,359 93
Other accounts	670 50

Total liabilities\$3,588,208 76

**Pacific States Savings and Loan Company, of San Francisco,
California.**

JOHN GARWOOD, Vice President.

WILLIAM S. PARDY, Secretary.

Amount of authorized capital.....	\$1,000,000 00
Par value of each share of stock at date of this report.....	\$100 00
Number of shares sold during the year.....	None
Number of shares cancelled and withdrawn during the year.....	883
Number of shares in force at close of year.....	5,029

RECEIPTS

Cash balance last report.....	\$55,580 89
Received from dues on certificates.....	178,481 20
Interest received	99,311 76
Premiums received	222 00
Loans repaid—mortgages	386,983 70
Loans repaid—certificates and collaterals.....	45,162 00
Real estate sold.....	17,199 35
Rents	5,538 68
Advances repaid	13,491 34
Partial repayment on loans.....	140,321 11
Incompleted loans	27,622 07
Bonds	101,475 68
Profits on sale of real estate.....	3,243 95
Total receipts	\$1,074,583 73

DISBURSEMENTS

Loans, flat and definite contract.....	\$403,963 94
Loans, certificates and collaterals.....	47,997 00
Discount	230 42
Dues repaid, Class "C" and profits.....	57,372 45
Paid on single payment and prepaid stock and interest.....	24,613 20
Paid on all other certificates and interest.....	105,813 13
Salaries	16,351 00
Collection fees	2,428 99
Current expenses	10,020 80
Real estate taken on foreclosures.....	12,693 87
Advances secured	12,847 21
Profit and loss.....	6,939 46
Partial loan repayments.....	142,844 74
Incompleted loans	12,222 36
Bonds	108,888 82
Repairs and insurance premiums on real estate.....	1,421 04
Taxes paid	3,036 08
Premiums	116 50
Cash	104,782 72
Total disbursements	\$1,074,583 73

ASSETS

Cash in bank and office.....	\$104,782 72
Loans on real estate.....	1,282,006 89
Real estate	76,410 00
Bonds	42,213 14

Bills receivable	\$6,420 00
Advanced for taxes.....	35 80
Attorney fees	101 50
Advanced for insurance premiums.....	845 06
Temporary accounts	93 79
Furniture and fixtures.....	400 00
Arrears	7,849 64
Total assets	\$1,521,158 54

LIABILITIES

Dues, Class "C" stock and earnings.....	\$56,372 90
Investment certificates and earnings.....	674,922 19
Prepaid and single payment stock and earnings.....	300,043 34
Advance installments	4,771 20
Partial payments on loans.....	289,849 98
Due on installment loans.....	27,622 07
Reserve for taxes.....	6,758 12
Contingent fund	145,446 39
Balance expense account.....	6,367 32
Temporary accounts	4,817 59
Undivided profits	4,187 44
Total liabilities	\$1,521,158 54

Western Loan and Building Company, of Salt Lake City, Utah.

P. W. MADSEN, President.

Dr. JOHN T. WHITE, Secretary.

Amount of authorized capital.....	\$18,000,000 00
Par value of each share of stock at date of this report.....	\$100 00
Number of shares sold during the year.....	74,386
Number of shares cancelled and withdrawn during the year.....	55,228
Number of shares in force at close of year.....	139,834

RECEIPTS

Cash on hand July 1, 1915.....	\$105,169 06
General fund	73,054 69
Withdrawal fee	11,679 13
"Paid-up" Class "D" stock.....	7,690 00
Installments on stocks.....	415,163 61
Savings stock "S".....	53,727 54
Advance payments on stocks.....	15,238 40
Interest and discount.....	202,289 08
Partial payments, real estate loans.....	493,169 65
Stock loans repaid.....	33,803 23
Attorney fee for examination of abstracts, etc.....	5,715 00
Real estate sold, rents, etc.....	32,504 82
Costs advanced in foreclosure proceedings, repaid.....	7,451 23
Insurance and taxes advanced, repaid.....	8,812 71
Agents' accounts	8,600 89
Sundry accounts	143,956 88
Transfer of deposits and exchange.....	3,924 02
Total receipts	\$1,621,949 94

DISBURSEMENTS

General fund	\$70,930 16
Withdrawal fee (agent's commission).....	12,166 25
"Paid-up" Class "D" stock withdrawn.....	200 00
Stocks withdrawn	320,350 35
Savings stock, Class "S" withdrawn.....	32,712 78
Advance payments withdrawn.....	8,309 00
Interest and discount.....	2,018 36
Real estate loans made.....	729,222 20
Stock loans made.....	37,387 40
Attorney fees (including examination of abstracts).....	6,080 00
Real estate expenses.....	7,960 32
Costs advanced in foreclosure proceedings.....	11,917 84
Insurance and taxes advanced for borrowers.....	21,607 13
Sundry accounts	128,948 34
Agents' accounts	6,890 33
Exchange	3,924 02
Dividend "Paid-up" Class "D" stock.....	1,447 00
Dividend general fund stock.....	3,600 00
Dividend permanent reserve fund stock.....	15,000 00
Cash on hand June 30, 1916.....	201,288 46
Total disbursements	\$1,621,949 94

ASSETS

Cash on hand and in bank.....	\$201,288 46
Loans on real estate.....	\$2,535,006 40
Less partial payments.....	681,311 61
	<hr/>
	1,853,694 79
Loans on general stock.....	60,718 41
Sundry accounts	2,136 22
Insurance and taxes advanced for borrowers.....	7,231 50
Advanced cost and expenses in foreclosure.....	28,597 17
Home office building.....	45,000 00
Real estate other than office building.....	111,038 39
Total assets	\$2,309,699 94

LIABILITIES

Permanent reserve fund capital stock.....	\$150,000 00
General fund capital stock.....	75,000 00
"Paid-up" or Class "D" stock.....	32,500 00
Installments paid on stock.....	1,573,003 51
Savings stock and advanced payments on stock.....	245,282 08
Sundry accounts	11,376 31
Surplus	13,556 63
Reserve fund real estate.....	111,038 39
Undivided profits (interest for last six months).....	97,943 02
Total liabilities	\$2,309,699 94

PROCEEDINGS
OF THE
EIGHTH ANNUAL CONVENTION
OF THE
Washington State League
OF
Local Savings and Loan
Associations

HELD IN THE
CITY OF TACOMA
October 6, 1916

**Proceedings of the Eighth Annual Convention of the Wash-
ington State League of Local Savings and Loan
Associations, Held in the City of Tacoma,
October 6, 1916.**

MORNING SESSION, OCTOBER 6, 1916.

The convention was called to order at 10:15 a. m. by President Alfred Lister, who, on behalf of the local associations, extended a cordial welcome to the visiting delegates.

The address of welcome was responded to by R. E. Porterfield of Spokane.

SECRETARY'S ANNUAL REPORT.

(Raymond R. Frazier.)

There are now in the United States 6,806 Building and Savings and Loan Associations with assets amounting to \$1,484,000,000 and a membership of 3,335,000, an increase in assets during the past year of more than \$125,000,000 or 9.3 per cent, and in membership of 231,000, or more than 7 per cent.

The State of Washington has fluctuated from twenty-first to nineteenth places among all the states and now occupies the twentieth position in respect to aggregate assets. As to increase in assets during the past year, however, she occupies thirteenth place.

NATIONAL LEGISLATION.

Your Secretary has, on behalf of the State League, conducted the usual amount of correspondence with our senators and representatives in Congress regarding pending legislation and is pleased to report having had assurances from our representatives that they would assist in procuring exemptions for our associations from the provisions of various emergency tax measures. All local associations are now completely exempted from the exactions of all such laws.

STATE OF WASHINGTON.

I am unable to present this year up-to-date statistics on the movement in this state, but we have seen it published in the newspapers from Olympia that there has been a substantial increase, not alone in assets and membership, but in the number of associations.

One close-corporation building and loan association has honorably retired from the field, or is doing so very rapidly, namely, the German of Seattle, and another has been taken over by the state authorities.

THE PRESENT LAW.

While the present law has given the state authorities better control over existing institutions and while it is in many respects a good, constructive piece of legislation, it is very apparent to all of you who assisted in passing this legislation that very grave weaknesses exist in the law; that while under it the state authorities have been enabled to rid our commonwealth of a dangerous class of foreign "Get Rich Quick" concerns located principally in Canada and in the extreme southern tier of states, we are facing what may prove to be even a greater menace within our own borders.

HISTORY OF STATE LEAGUE.

Eight years ago the State Auditor invited all the associations in the state to send their representatives to meet with him at Olympia for the purpose of organizing a State League. Some of us attended that meeting and have been present at every subsequent meeting of the League. We have met twice in Olympia, Tacoma and Seattle and once in North Yakima and Spokane.

The State Auditor stated when he called us together eight years ago that he had the good of the cause only in mind and expressed the hope that our uniting together would result in mutual benefit, in better legislation and in more uniform methods of operation. He pointed to the fact that no two associations were operating along precisely the same lines.

As a direct result of that first meeting, and after several years of very hard work, of patient conference and serious constructive effort on the part of the majority members of the League represented at that first meeting, the law of 1913 was finally placed upon the statute books.

A few of the associations assumed from the start a hostile attitude toward legislation of any kind. This opposition was confined to those associations operating under the antiquated system known as the "National Building and Loan Association" plan. This group included all of the foreign associations operating in this state, as well as a few of our own state institutions. These associations frowned upon any reform which contemplated a possible infringement upon the agency system of selling building and loan association shares; and I confidently believe that at least one association (which, by the way, never operated as a legitimate, *bona fide* building and loan association, but rather as a close corporation, charging enormous interest rates and commissions on real estate loans and other charges, such as architect fees, equally excessive and inequitable) cunningly opposed legislation because the officers of the association did not want the closer supervision and the actual state examination which was sure to be provided for in a new law.

But the main objection of the other minority associations was that any legislation would doubtless tend toward the discouragement and the possible elimination of the practices embodied in the old "National Building and Loan Association" idea. The evils of this old system are so well known that they need not be enumerated here. Suffice it to say that I have yet to discover a single authority on financial institutions in this country who does not condemn in severest terms the old "National Building and Loan Association" plan, with its irresponsible agents, its "local boards" or branches, its loaning money everywhere—in foreign states as well as in small villages far removed from the home office in its own state—its "tontine" features, its big membership fees cunningly and painlessly ex-

tracted from the unwary wage earner while he was under the influence of "gas" generated by the hot air of lying, disreputable building and loan stock-selling sharks, who talked about the wonderful stability of building and loan associations and the big dividends that they were able to pay to their shareholders on account of their alleged mutuality, while being under state supervision, etc.

The law of 1913 was finally put into shape and submitted to the legislature. Concessions to existing associations were made so as not to force them to a complete abandonment of their existing methods of operation. The officers and the attorneys of one foreign association became quite excited, and some bold statements bordering on threats were made; but they were finally satisfied on having worked into the law certain provisions regarding membership fees and the so-called guaranty system.

Now what has happened?

I wish to go on record here with the statement that while many of us were strongly opposed to letting the bars down as to membership fees and "tontine" features, I am sure none of us had any conception that we would ever be confronted in this state with the unfortunate condition which now prevails. I say "unfortunate"—it is worse than that, it is scandalous. I have had complaints from scores of business and professional men regarding the misconduct, the misrepresentation of the numerous recently organized savings and loan associations in this state. I am informed that most of these associations have been promoted by a "professional" organizer. This professional has not sought the counsel and advice of the State League nor of any of its officers, for the reason, no doubt, that it has not been desired nor intended that these new associations should operate in keeping with the spirit of the best thought on the subject, to say nothing of the spirit of the law itself. I am told that a number of these associations, without having any assets whatever, have boldly opened up offices in expensive ground-floor locations; and if I have been asked once, I have

asked a hundred times, "How is it possible?" I can think of one possible answer to the question, and that is that the majority of these new companies employ rafts of the old type of Building and Loan selling agents who go to our wage earners and, on the strength of official statements that there has been a failure of a legitimate building and loan association in this state, mulct from our people as large an amount of money as they can in each individual case and then proceed to divide the money up as membership fees instead of crediting it as an advance payment on shares as they have led the new member to believe would be done. These abuses have already been carried to such an extent, and the knowledge of them has become so well established, that it is common talk among business and professional men in Seattle and among financial writers for various daily and weekly publications there, that the situation is a positive menace to our business in this state.

I say congratulations and Godspeed to those managers of building and loan associations who begin modestly and who insist upon a full and complete explanation of the membership and of all "tontine" features provided for in their by-laws; to those men who are getting business on the strength of the good reputation of legitimate institutions, who commit the worst and most offensive kind of misrepresentation involved in the practice of not representing the *whole* truth regarding their methods, I say "shame on you," for you are prostituting your business that had its inception in the desire among men to help their fellows.

In the city of Philadelphia they have more than one thousand building and loan associations. The movement has the approval and support of everybody. If Tacoma had as many associations, she would have at least sixty associations scattered throughout her various wards. You can scarcely conceive of this condition. Yesterday we heard a representative of the state say, "We have enough associations in Washington." He no doubt meant we have enough associations such

as they are! And I heartily endorse that sentiment, but isn't it shameful that men are compelled to entertain this feeling?

Now these are merely words; the question is, "What are we going to do about it?" There is only one thing to do and that is for you men who believe in square dealing to buckle on the armor and fight for what you believe in.

The spectacle here yesterday of a state official genuinely interested in the welfare of our association coming to us with recommendations based upon several years of experience, recommending in all good faith that we do certain things to correct the evils of the system now followed by a number of associations, and being turned down by the institutions he sought to help, was positively ludicrous.

REPORT OF COMMITTEE ON CREDENTIALS.

The Committee on Credentials reported, showing the following associations to be in good standing and entitled to seats in the convention and a voice in its deliberations:

Interstate Building, Loan and Trust Association, Walla Walla.

Olympia Building and Loan Association, Olympia.

Fidelity Savings and Loan Association, Spokane.

Citizens Savings and Loan Society, Spokane.

Spokane Savings and Loan Society, Spokane.

Yakima Savings and Loan Association, North Yakima.

Bellingham Savings and Loan Association, Bellingham.

Tacoma Savings and Loan Association, Tacoma.

Northwest Building and Loan Association, Tacoma.

State Building and Loan Association, Tacoma.

Washington Savings and Loan Association, Seattle.

Mutual Savings and Loan Association, Seattle.

Puget Sound Savings and Loan Association, Seattle.

The committee also reported that twelve other associations had remitted the sum of five dollars each and applied for membership in the State League, and recommended that in view of the great number of applicants, the applications be referred

Executive Committee for recommendation at the next

re.—This action was later in the day reconsidered and
a was made and duly carried that the applications be
to the Executive Committee with power to act.)

as voted that pending the decision of the Executive
the five-dollar fee be returned to the respective asso-

THE LOAN SITUATION.

subject was to have been discussed by Mr. Roberts of
Takima. In his absence, Mr. McWilliams of Spokane
discussion. He was followed by Mr. Hopping of Ta-
Mr. Linden of Seattle and Mr. McDowell of Olympia.
Williams stated that the new federal farm loan bank
not, in his judgment, materially affect the farm loan
in Eastern Washington because of the following rea-
that he considered the act cumbersome, and for the further
that it did not operate to relieve farmers in any way.
Williams and the other gentlemen who discussed the
agreed that it was necessary for our associations to
their rates of interest on city loans in order to meet pres-
itions.

2 o'clock the meeting adjourned.

AFTERNOON SESSION.

The meeting was called to order by President Lister at 1:30 p. m.

SECURITY VS. INTEREST AND DIVIDENDS.

(H. H. BLACKBURN, Tacoma.)

Security is anything that makes money, or an indebtedness, more assured in its payment or more readily recoverable.

Interest is the compensation for the use of money or the forbearance of a debt and becomes part of and incident to the debt.

Dividends are profits to be distributed proportionately.

In considering this topic, Security vs. Interest and Dividends, or the relationship of security to interest and dividends in the business of money loaning, let us keep these definitions in mind.

The object in loaning money is the interest, but, to the end that the interest be assured there must be security for the debt, and anything that influences, adds to or detracts from, the security should not be overlooked or disregarded—note that word “anything” in the definition of security; neither should it be forgotten that interest “becomes part of and incident to the debt” and is, therefore, like the principal, dependent on the security.

To the extent that the security for a loan is lacking, or fails, to that extent the indebtedness can not be collected and profits and dividends are reduced, if, indeed, an actual loss of principal is not suffered.

Since the debt is dependent on the security for its payment and the interest is part of and incident to the debt and profits and dividends are derived from the interest, if profits and dividends there be, it is evident that in this inter-relationship security plays the major role and the lender of money, in order to achieve success in the business, conserve the principal and insure profits and dividends, must be expert at judging security, of what it consists, and the influences affecting it.

ing the things proper to be considered with reference to the property, or physical, security.

valuation, how does it compare with other similar prop-

location and environment. Is it in a locality likely to

or become worse? Will its surroundings have a tend-

increase or depress its value? In this connection the

ty of churches, schools, hospitals, factories, stores, ware-

depots, cemeteries, parks, railroads, car lines, markets,

ding or adjacent special districts, such as the resi-

the manufacturing, the wholesale, the shopping, the

the waterfront, the Chinese and the like, and the view,

suggest consideration.

use and adaptability. Is it arranged and equipped for

to which it is put or for which it is intended, or can it

ily utilized for or adapted to other use or uses?

rental value. Will it rent for a sum sufficient to cover

ying charges and the interest on the loan, or will some

these have to be made up from other sources?

size and arrangement. Are they usual or out of the

y and special?

condition. Is it new and modern or old and antiquated?

repair or dilapidated? Is it well kept or neglected?

occupancy. Is it occupied by the owner or by a tenant?

maintenance and upkeep. Will the probable cost of

e moderate or excessive?

taxes. Are they low or high?

municipal improvements, such as paving, sewers, water.

hey been put in and have the special assessments there-

a paid?

insurance. What is its insurable value and what the

premium? What is its fire protection?

opportunity for additions and extensions in the event of

ansion of business. Can they be made or will another

have to be found in such event?

As to the borrower:

Is he a resident or a nonresident?

Is he married or unmarried and what is the condition of his domestic affairs?

Is he in business for himself or working for a salary or wages?

Is he experienced in his business or employment or inexperienced?

What competition has he in his business?

What special hazards is he or his business subject to?

What are his habits in business and socially?

Is he economical and saving or prodigal and extravagant?

Is he steady in business or good at holding a job, or is he unsteady, shifting and fickle in his business or employment?

Has he been successful or unsuccessful, and why?

What are his business and family affiliations and connections?

What are his present and prospective expenses and are they reasonable, considering his station in life and business?

What is his present and prospective income and what is its source?

What is his record as to being prompt or slow in the payment of his debts and obligations?

Has he been through bankruptcy?

How is he regarded by the business community and by his neighbors?

Does he appear and talk reasonable and as though he had faith in himself, in his ability and in his undertaking, or does he appear and talk unreasonable and as though doubtful of success?

Is he optimistic or pessimistic?

Many other features proper to consider in connection with the property and the borrower in placing a loan, all affecting the security, either directly or indirectly, could be mentioned, and almost every loan negotiated suggests new ones, but sufficient have been referred to for illustration.

condition of the times; the supply of and demand for competition in the loaning business; and prevailing interest; as, also, the terms and conditions of the con-
payment, are other features and circumstances that taken into account in placing loans, as they all bear among the things that make up security and affect dividends.

not to be presumed that any security for a loan will bring in and surrounding it all the favorable features, the features affecting the security, in so far as may be considered and a loan should not be made without being sufficient to give to the security a wide margin of the loan.

the rate of interest. A high rate, and especially for a savings and loan association, I deem to be unwise, for two reasons: first, if the rate is excessive it fails to attract borrowers; second, if the rate is excessive it fails to attract the best security and competitor associations, in the loaning business, at a lower rate, secure these and best secured loans, while the money of the high-rate association lies idle and fails to return interest to its treasury and dividends to its members; second, to the extent that good security are lost by a savings and loan association because of its excessive interest charge, to that extent the association is failing to exercise its function and perform the duties contemplated by the law under which it is organized.

not wish to be understood as advocating that these associations should cut their interest charges below prevailing rates on well secured straight loans, as that would deter investors and deprive the associations of needed funds. The interest rate and interest rate of the associations should be an inducement for the investor to seek membership and stock; but not so high as to give the opinion that the interest rate should not exceed the prevailing straight loan interest rate.

I roughly agree with Mr. Linden who, in his splendid address last year on "The Borrower" asserted "large dividend

payments to depositors and heavy interest charges to borrowers is wrong."

The chief function of the savings and loan association is to supply a form of loan and saving that the average wage earner or small salaried man can handle and thereby become a home owner. It is intended as a sort of economic encouragement club for our most numerous class of people and it is not contemplated that such an association should become the vehicle by which large dividends are conveyed to the affluent as depositing investors.

The man, struggling with poverty and adversity, trying to secure a home for himself and family is encouraged more in his efforts to that end through the assistance of a savings and loan association when he realizes that the major part of his monthly payment is applied on his main debt instead of to the interest charge, and when his payments and dividends enable him to receive his release of mortgage at the end of his term of payments, his joy is in the main fact that the home is his. He feels that he has earned it, congratulates himself, takes pride in contemplating that his security, the property and himself, have proven good, and little regards the accretion to his savings, by way of dividends, that helped in the process. He paid in to the association for a home, not for dividends. And to discourage such an one or to make it harder for him to achieve such a laudable end by charging an excessive interest, so investing stockholders, who already have homes, may draw down dividends in excess of normal interest on their money appears to me to be perverting the purpose of the savings and loan association, as favoring the strong against the weak, and as detracting from the helpfulness that such associations should exercise.

I would, therefore, advise the savings and loan association to carefully guard its loans with reference to their security, to the end that neither loss of interest or principal may likely occur; but to make its interest rate so fair and reasonable that it will attract and encourage a deserving class of wage earners

ne builders, meeting proper competition, and be satisfied with a measurably reduced dividend rate.

so doing the association will be performing its most complete functions and will be doing the most good in the community in which it operates.

paper was so complete and convincing that it left no room for discussion.

STATE EXAMINATIONS.

(J. L. Cooper, Spokane.)

the examinations of savings and loan societies were not compulsory until the act of 1913 went into effect. Prior to the passage of this act, a few societies of the state had voluntarily requested the State Auditor to make examinations, and in each case this request was complied with.

The section requiring the State Auditor to make examinations requires the society under examination to give the examiner complete access to all books and records of the society and provides that the examination must be full and complete. Of much importance cannot be attached to these examinations. In fact, compulsory examination is the teeth of the savings and loan association law. The provisions of the law might be perfect but without some systematic method of insuring the law is being complied with, the law itself would be of little

* The state examiner should require all societies to keep a record of all charges of this kind (membership fees and dividends) as the members are entitled to know the operating expenses and how they are paid.

The principal reason, of course, for requiring examinations of societies is to insure safety to the depositor who entrusts his savings to our care, but it should not stop with ascertaining the fact that we are in sound financial condition, but should also be a means of helping us to accomplish much in the future by uniform methods as the state examiner is in a position to put first hand the results of the various plans under which

we operate. He should not be merely a bookkeeper to check our accounts, but should be a careful student of the most improved savings and loan methods and from his wide experience gained through his contact with the savings and loan business should advise with the different societies as to how they may best fulfill the purposes for which they are organized.

In forming new societies the examiner can be of great help and should recommend the best plan of operating and should see that bad practices are avoided from the beginning. In this way new societies can be given the advantage of the experience of older societies and consequently avoid many mistakes which most of us have made.

Savings and loan societies receive the most complete examinations of any financial institution in the state; for instance, the inspector will spend from ten days to two weeks making an examination of a society with assets of \$500,000.00 while a national bank examiner with one assistant will examine a bank with ten times the assets in three days.

In the past I believe banks and other financial institutions have looked upon supervision as a necessary evil and have resented any advice or suggestion as a slur on themselves or their institution, but the foundation of the savings and loan business is based on co-operation and we should co-operate with the state examiner for the welfare of our own society and the welfare of all the other societies in the state.

The coming of the state examiner should be looked forward to by the secretary of every society in the state as an opportunity for acquiring the latest in savings and loan methods and publicity schemes.

I think thus far the examinations have resulted in a great deal of good in getting us in closer touch with our state officials and in calling our attention to a great many things which are overlooked from the simple fact that they are constantly before us. I hope to hear some good suggestions today as to how the examinations can be made more valuable not only in safeguarding the savings intrusted to our care, but in extending

work in which we are engaged. I trust we will always have the supervision of a man as competent who takes as much selfish interest in our welfare and whose supervision is free from petty technicalities as our present State Auditor, the Honorable C. W. Clausen.

Cooper's paper was freely discussed. Mr. Leghorn of the Auditor's office raised the question as to whether the examination went far enough, and suggested the advisability of the state examiner communicating with delinquent borrowers at the time of conducting the examination.

Mrs. Lister and Hopping described in detail the method used by the Tacoma Savings and Loan Association in looking up on all accounts periodically.

UNITED STATES LEAGUE CONVENTION.

W. F. McDowell of Olympia submitted an oral report of the United States League convention held in St. Louis in 1916. (Verbatim reports of this convention were distributed by the secretary of the league to the delegates present.) In concluding his report, Mr. McDowell stated that the suggestions of Mr. George F. Gilmore, the president-elect of the United States League, regarding standardization of our associations throughout the country on a plan having the least red tape and the least in the way of fees of any kind and fines, and which would enable persons to start in saving whenever they will and with any amount they have, be endorsed by our state league. This resolution was duly seconded and unanimously carried, and the secretary was instructed to convey news of the action to Mr. Leghorn.

THE YEAR'S WORK: THE FUTURE.

This subject was discussed by Mr. J. F. Leghorn, representative of the Auditor Clausen. Mr. Leghorn stated that the business of the associations in the state had increased during the year 1916, the total amount of savings being over \$2,000,000, and that 10,000 new members had been added. He said one association was retiring from business and several new ones had been started. Mr. Leghorn referred to one

Seattle association which had been taken charge of by his department, and expressed the hope that they would be able to wind it up without loss. He urged the necessity of larger contingent funds and also urged a greater interest on the part of directors in some of the associations. Mr. Leghorn referred to the legislative conference held in Tacoma yesterday at the call of the State Auditor and expressed disappointment that some of the newly organized associations had not approved of the remedial legislation proposed by the State Auditor.

President Lister announced that automobiles would be in waiting at 5:00 o'clock and that a banquet would be tendered at the Hotel Tacoma at 6:30 o'clock.

RESOLUTIONS.

REPORT OF COMMITTEE ON RESOLUTIONS.

Your committee recognizes the legitimacy of the use of the membership fee and acknowledges the difficulty of organizing new associations without its use, but deplores any concealment of this fee to prospective members or misrepresentations in any form. Your committee recommends greater care on the part of associations using this plan in supervising the work of their agents and requiring refunds where the limited education of the applicant has resulted in a misunderstanding.

Your committee recommends that a standing committee on publicity be appointed whose duty it shall be to provide the newspapers of the state with information from time to time of the aims and progress of the savings and loan business to the end that the general public become better informed on this subject.

Your committee recommends that a committee be appointed to report at the next convention on the most desirable forms of certificates of membership, fully paid certificates, and passbooks, and recommend the adoption thereof by all associations with the object of harmonizing our plans and simplifying them for the public. Your committee suggests that copies of forms in present use be obtained from all associations for consideration.

Resolved, That the State League of Savings and Loan Associations express to the Hon. C. W. Clausen, state auditor, and to his assistant, J. F. Leghorn, its hearty support of their efforts to keep the savings

and loan business on a high and respectable plane, and its desire to keep the the savings and loan business on a high and respectable plane, and its desire to co-operate with them in any legislation they may deem necessary to protect the public from exploitation and misrepresentation by those using the name of savings and loan associations but evading the spirit and requirements of the law.

Resolved, That the State League of Savings and Loan Associations thank the local associations of Tacoma for their cordial welcome and for the entertainment provided for the delegates during their presence in the city.

Resolved, That the secretary of the State League express to the Tacoma Commercial Club and to the Tacoma Hotel our thanks for the use of their assembly rooms.

Your committee recommends that this convention adopt a resolution or amendment providing for the annual election of a delegate and an alternate delegate, one to attend the convention of the United States League of Savings and Loan Associations and that the treasurer of this State League be authorized to advance \$50.00 per annum to the delegate so elected to assist in defraying his expenses in attending the United States League convention.

Respectfully submitted,

F. S. McWILLIAMS,

C. H. SPRINGER,

R. E. PORTERFIELD,

Committee.

ELECTION OF OFFICERS.

The following officers were elected for the ensuing year:

William Thaanum, President.....	Seattle
F. S. McWilliams, First Vice President.....	Spokane
Raymond R. Frazier, Second Vice President.....	Seattle
W. F. McDowell, Secretary.....	Olympia
C. L. Roberts, Treasurer.....	Tacoma

HOSTS

Presidents.

1909-1910	A. B. Weed.....	North Yakima
1910-1911	E. D. Olmsted.....	Spokane
1911-1912	Raymond R. Frazier.....	Seattle
1912-1913	Frank A. Chase.....	Spokane
1913-1914	Logan H. Roberts.....	North Yakima
1914-1915	R. E. Porterfield.....	Spokane
1915-1916	Alfred Lister	Tacoma

Vice Presidents.

1909-1910	R. Campbell	Seattle
1910-1911	Raymond R. Frazier, First Vice President.....	Seattle
1910-1911	Alfred Lister, Second Vice President.....	Tacoma
1911-1912	Alfred Lister, First Vice President.....	Tacoma
1911-1912	Logan H. Roberts, Second Vice President....	North Yakima
1912-1913	Logan H. Roberts, First Vice President.....	North Yakima
1912-1913	Dudley Eshelman, Second Vice President.....	Tacoma
1913-1914	R. E. Porterfield, First Vice President.....	Spokane
1913-1914	Alfred Lister, Second Vice President.....	Tacoma
1914-1915	Alfred Lister, First Vice President.....	Tacoma
1914-1915	W. F. McDowell, Second Vice President.....	Olympia
1915-1916	William Thaanum, First Vice President.....	Seattle
1915-1916	W. F. McDowell, Second Vice President.....	Olympia

Treasurers.

1909-1910	H. O. Shuey.....	Seattle
1910-1911	H. O. Shuey.....	Seattle
1911-1912	Frank A. Chase.....	Spokane
1912-1913	Alfred Lister	Tacoma
1913-1914	W. F. McDowell.....	Olympia
1914-1915	Logan H. Roberts.....	North Yakima
1915-1916	C. D. Robinson.....	Spokane

Secretaries.

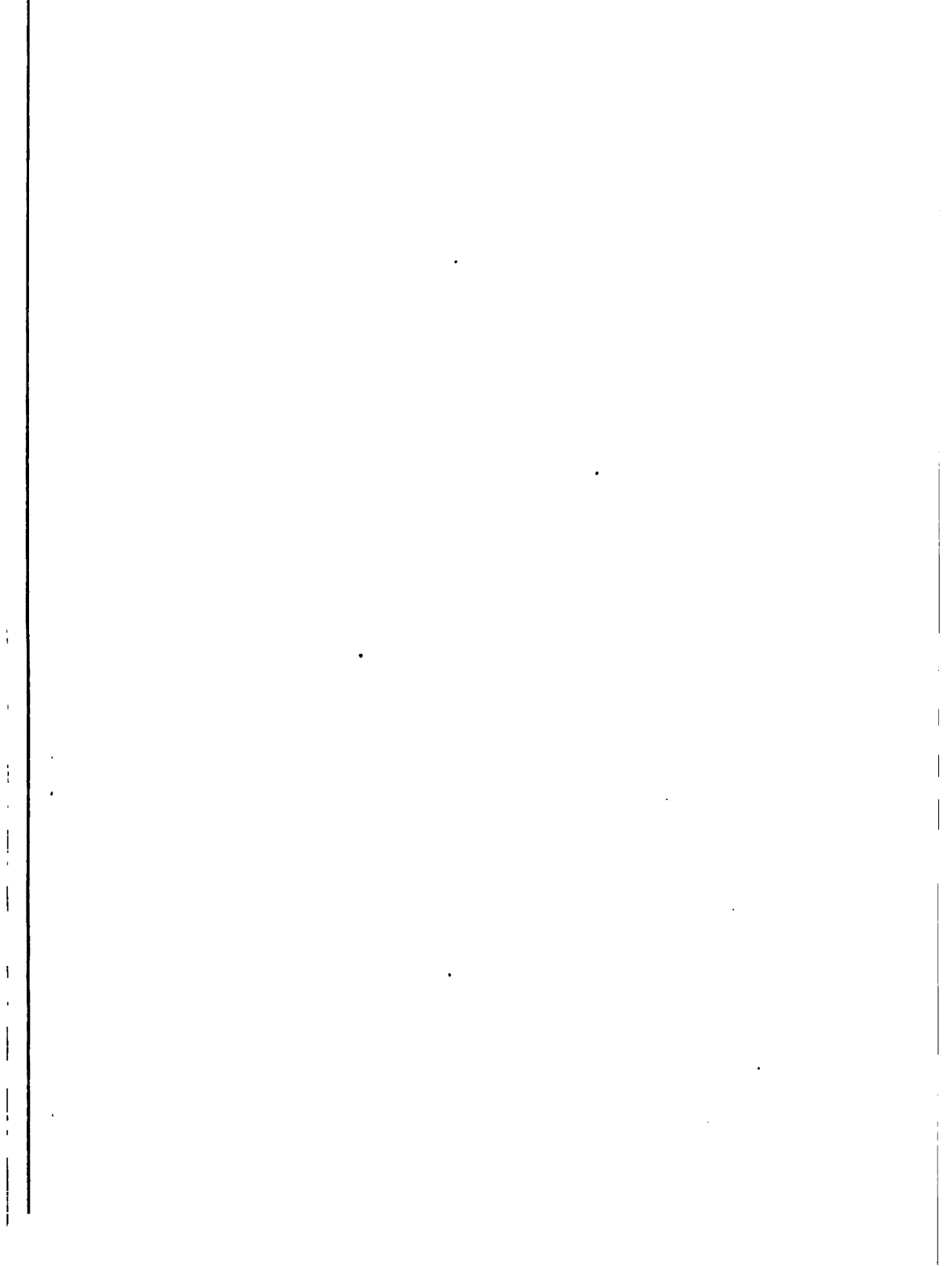
1909-1910	Dudley Eshelman	Tacoma
1910-1911	Dudley Eshelman	Tacoma
1911-1912	Dudley Eshelman	Tacoma
1912-1913	Raymond R. Frazier.....	Seattle
1913-1914	Raymond R. Frazier.....	Seattle
1914-1915	Raymond R. Frazier.....	Seattle
1915-1916	Raymond R. Frazier.....	Seattle

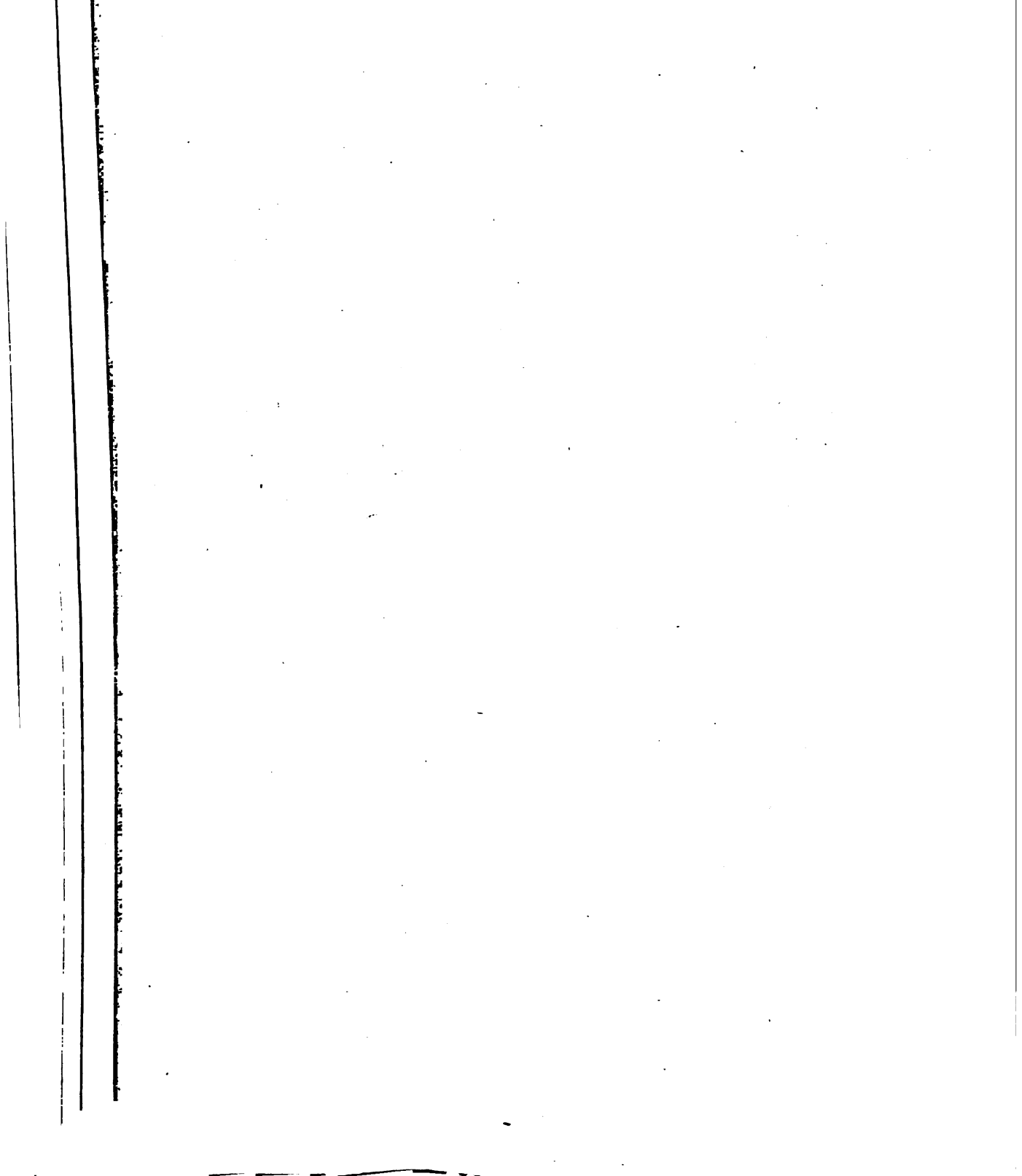
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STATE OF WASHINGTON

Eighth Biennial Report

OF THE

State Board of Control

AND

Fifth Biennial Report of the
Board of Managers

Washington State Reformatory

FOR THE

Term Beginning October 1, 1914, and
Ending September 30, 1916

TO THE

Governor and Legislature of the State of Washington

Fifteenth Regular Session

1917

OLYMPIA, WASH.

PUBLIC PRINTER  FRANK M. LAMBORN

1916

LETTER OF TRANSMITTAL.

To His Excellency, the Governor, and the Senate and House of Representatives of the State of Washington.

GENTLEMEN: Pursuant to the provisions of the law, we have the honor of herewith submitting for your consideration, the Eighth Biennial Report for the two years' period ending September 30, 1916, together with its recommendations for appropriations for the years 1917-1918.

FRANK C. MORSE, *Chairman.*

T. E. SKAGGS.

W. H. COCHRAN.

STATE BOARD OF CONTROL.

(Office, State Capitol, Olympia, Washington.)

FRANK C. MORSE, *Chairman.* T. E. SKAGGS. W. H. COCHRAN.
O. A. TORGERSON, *Secretary.* A. W. JOHNSON, *Auditor.*
JESSIE M. WATSON, ELIZABETH S. CAMERON, *Stenographers.*

INSTITUTIONS.

Western State Hospital, Fort Steilacoom.

DR. W. N. KELLER.....*Superintendent*
DR. FRANK T. WILT.....*First Assistant Physician*
DR. A. C. STEWART.....*Second Assistant Physician*
DR. W. V. GULICK.....*Third Assistant Physician*

Eastern State Hospital, Medical Lake.

DR. A. S. OLIVER, JR.....*Superintendent*
DR. M. W. CONWAY.....*First Assistant Physician*
DR. J. C. BOYLE.....*Second Assistant Physician*

Northern State Hospital, Sedro Woolley.

DR. J. W. DOUGHTY.....*Superintendent*
DR. H. D. MILLER.....*First Assistant Physician*
DR. JOSEPH HEHR.....*Second Assistant Physician*

Institution for Feeble Minded, Medical Lake.

S. C. WOODRUFF.....*Superintendent*
EDITH M. WOODRUFF.....*Matron*

State Soldiers' Home, Orting.

ED. C. WARNER.....*Superintendent*
MRS. ALICE B. WARNER.....*Matron*
MARTIN L. BIBB.....*Adjutant*
DR. D. A. GOVE.....*Physician*

Washington Veterans' Home, Retall.

W. H. WISCOMBE.....*Superintendent*
MRS. W. H. WISCOMBE.....*Matron*
WALTER L. MCCALLUM.....*Adjutant*
DR. J. W. JOHNSON.....*Physician*

State School for the Deaf, Vancouver.

THOS. P. CLARKE.....*Superintendent*
MARY B. CLARKE.....*Matron*

State School for the Blind, Vancouver.

MRS. SADIE E. HALL.....*Superintendent*

State Penitentiary, Walla Walla.

HENRY DRUM..... *Superintendent*
 C. A. LEDGERWOOD... *Assistant Superintendent*
 C. F. H. VOLLENDORFF..... *State Clerk*
 F. H. BUTCHER..... *Secretary Prison Board*
 B. L. JONES, M. D..... *Physician*
 REV. T. J. CANNON..... *Chaplain*

State Training School, Chehalis.

GEO. A. SHEAFE..... *Superintendent*
 OLNEY CHASE..... *Assistant Superintendent*
 O. J. SAVILLE..... *Parole Officer*
 DR. J. M. SLEICHER..... *Physician*

State Reformatory, Monroe.

DONALD B. OLSON..... *Superintendent*
 CHARLES MILICE..... *Secretary*
 J. M. TADLOCK..... *Director Education*
 REV. WILFRED WITHINGTON..... *Chaplain*
 REV. D. P. KELLY..... *Priest*
 C. T. WEBB..... *Parole Officer*
 JAMES C. WILCOX..... *Captain*
 H. K. STOCKWELL, M. D..... *Physician*

State School for Girls, Grand Mound.

MISS MARY CAMPBELL..... *Superintendent*

DR. J. H. WEBSTER..... *State Dentist*

LEGISLATIVE ACTS RELATING TO THE FUNCTIONS OF THE BOARD OF CONTROL.

Chapter 119, Laws of 1901, created the State Board of Control as successor of the Board of Audit and Control, and defined its duties and powers, constituting it the governing, managing and purchasing Board for the six charitable, reformatory and penal institutions in existence at that time.

Chapter 121, Laws of 1905, charged the State Board of Control with the transportation of committed convicts, insane and incorrigibles.

Chapter 166, Laws of 1907, amended the original Board of Control law and extended the jurisdiction of the Board to include the newly created Institution for Feeble Minded. The State Capitol was also placed in the custody of the Board and provision made for visitation to and reports on conditions, needs and appropriations for the five state educational institutions, investigation and supervision of their financial and accounting systems.

Chapter 155, Laws of 1907, "Indeterminate Sentence" act, provided that the Board, with the warden (superintendent) of the penitentiary, constitute the Prison Board to terminate sentences and release all prisoners hereafter confined in the penitentiary.

Chapter 156, Laws of 1907, provided for the establishment and maintenance of a branch of the State Soldiers' Home, under the name of the Washington Veterans' Home, and gave the Board power to manage and govern the same.

Chapter 167, Laws of 1907, creating the Washington State Reformatory, provided that the Board should select and purchase the site, erect temporary buildings and have the business management of the institution.

Chapter 184, Laws of 1909, provides that one member of the State Board of Control be a member of the Board of Military Auditors.

Chapter 249, Laws of 1909 (Criminal Code), defines and prescribes to the duties of the Board of Control in several particulars.

Chapter 97, Laws of 1909 (School Code), defines the duties of the State Board of Control relating to Institution for Feeble-Minded, School for Deaf, and School for Blind.

Chapter 154, Laws of 1909, provides that the State Board of Control shall certify to the state auditor all local improvement assessments levied against state property occupied by any state institutions.

Chapter 222, Laws of 1909, designates the State Board of Control as part of a commission to acquire a site for the Western Washington Hospital Farm, construct buildings, etc., transfer patients thereto from the Western Washington Hospital for Insane and manage the institution generally. Chapter 44, Laws of 1911, appropriated funds for purchase of additional land and construction of permanent buildings, the institution to be named the Northern Hospital for Insane.

Chapter 132, Laws of 1911, amended the laws relating to purchase of jute and operation of jute mill at the State Penitentiary.

Chapter 38, Laws of 1913, provides that the price at which all grain sacks manufactured at the State Penitentiary shall be offered for sale shall not exceed the estimated cost of the manufacturing thereof plus a profit of 12½ per cent on said estimated cost. It also provides that the time after which said sacks may be sold in the open market shall be changed from April 1st to June 1st. It further provides that in the event all the sacks assigned to any one county shall not be applied for and sold, the amount not applied for shall be apportioned *pro rata* to such counties as may have an excess of applications for bags in proportion to the excess.

Chapter 67, Laws of 1913, provides that the chairman of the Board of Control shall be a member of the North Yakima Armory Commission.

Chapter 157, Laws of 1913, provides that there be established an institution to be known as the State School for Girls, and for the appointment of a commission by the Governor to select a site for same. It further provides that the government, control and business management of such school shall be

vested in the State Board of Control. It further provides for the transfer of all girls in the State Training School at Chehalis to the State School for Girls.

Chapter 172, Laws of 1913, authorizes counties and municipalities of the first class to establish and maintain tuberculosis hospitals and provides state aid therefor. It provides that the supervision of institutions operating under this act shall be by and under the State Board of Control.

Chapter 184, Laws of 1913, provides that the State Board of Control shall select a suitable site for a state powder factory and shall have charge of the operation of the same, and the sale of the products thereof; provided, the governor, after investigation made by a commission appointed for the purpose, shall deem it advisable to expend the money appropriated for the construction and operation of such powder factory.

Chapter 114, Laws of 1913, provides that persons confined in the State Penitentiary, not engaged in other work required by the State Board of Control, may be employed upon the construction of public highways within the state.

Chapter 80, Laws of 1915, amended sections 5554-7, 5554-11, 5554-14 of Remington & Ballinger's Annotated Codes and Statutes of Washington by eliminating the inspection and supervision of county tuberculosis hospitals by the State Board of Control.

Chapter 82, Laws of 1915, provided that it shall be the duty of the State Board of Control in co-operation with the United States bureau of immigration, to arrange for deportation of alien insane who are now confined in the state hospitals or that may hereafter be committed, and appropriation of \$75,000.00 was made for this purpose.

Chapter 107, Laws of 1915, amended section 8933 of Remington & Ballinger's Annotated Codes and Statutes of Washington by withdrawing the provision made therein for visitation to and reporting on condition, needs and appropriations for the five state educational institutions and for the investigation and supervision of their financial management and accounting system by the State Board of Control.

FINANCIAL REPORT.

EXPENDITURES AND REVERSIONS, OCTOBER 1, 1914,
TO APRIL 1, 1915.

Statement Showing Amounts Expended of Appropriations of 1913, from
October 1, 1914, to March 31, 1915, and Amounts Reverting to State
Treasury, April 1, 1915.

Table No. 1.

INSTITUTIONS AND FUNDS	Expended Oct. 1, 1914, to March 31, 1915	Reverted to State Treasury April 1, 1915
WESTERN STATE HOSPITAL:		
Maintenance	\$183,676 41	\$4,886 80
Laundry machinery	1,564 88	589 19
Dam and reservoir	1,914 02	
Hydrotherapy building and equipment	4,999 18	82
Boiler and stoker	174 80	820 99
Addition to pumping plant	2,999 80	28
Fire escapes	3,153 24	17 50
Furniture and carpets	790 38	66
Library	163 75	179 70
Totals.....	\$149,465 96	\$6,475 26
EASTERN STATE HOSPITAL:		
Maintenance	\$101,693 77	\$58,443 79
Farm buildings, etc.	1,849 88	
Concrete tank and silos.....	6,588 87	
Corn cutting machine.....	43 28	12 62
Library	130 38	66 47
Smokestack		2,002 30
Totals.....	\$110,304 18	\$60,524 58
NORTHERN STATE HOSPITAL:		
Maintenance	\$68,511 73	\$27,011 92
Farm cottages	17,818 56	15
Kitchen, etc	19,750 04	70 49
Dairy stock	1,400 00	100 00
Totals..	\$77,980 33	\$27,182 56
INSTITUTION FOR FEEBLE MINDED:		
Maintenance	\$28,382 76	\$19,620 78
Buildings	50,365 40	
Water, sewer, etc	1,080 12	
Totals	\$80,828 28	\$19,620 78
STATE SOLDIERS' HOME:		
Maintenance (State) ..	\$19,304 64	\$40,873 73
Maintenance (United States)	11,770 62	*19,897 70
Furniture and carpets	1,162 73	
Repairs and improvements.....	688 41	11
Water, sewer, etc.....	750 51	10,537 52
Library	67 16	36 18
Colony maintenance	9,199 46	1,181 44
Totals	\$42,943 52	\$62,627 90

*Balance not reverting.

Expenditures and Reversions—Continued.

INSTITUTIONS AND FUNDS	Expended Oct. 1, 1914, to March 31, 1915	Reverted to State Treasury April 1, 1915
WASHINGTON VETERANS' HOME:		
Maintenance (State)	\$19,348 94	\$7,638 58
Maintenance (United States).....	22,071 49	*9,167 42
Repairs and improvements.....	2,426 97	31 20
Retaining wall		5,000 00
Boiler, etc.....	3,607 06	250 20
Totals.....	\$47,539 45	\$12,888 98
STATE SCHOOL FOR DEAF:		
Maintenance	\$22,158 11	\$7,781 81
Manual training and supplies.....	1,286 71	187 05
Repairs and improvements.....	273 80	186 79
Library	29 80	1 58
Expense to Gallaudet.....		24 55
Fire escapes		10,000 00
Totals.....	\$23,608 42	\$18,131 73
STATE SCHOOL FOR BLIND:		
Maintenance	\$9,439 31	\$8,960 97
Repairs and improvements.....	1,299 24	86
Manual training, etc.....	806 60	
Library	187 89	52
Totals.....	\$11,811 54	\$8,992 35
STATE PENITENTIARY:		
Maintenance	\$33,897 11	\$43,698 84
Furniture and carpets.....	412 41	61 89
Repairs and improvements.....	1,454 77	89 87
Library	54 49	33 81
Chaplain	600 00	171 48
Operating jute mill.....	11,125 52	370,082 30
Purchase of jute.....		24,367 56
Totals.....	\$77,544 30	\$438 455 50
TRAINING SCHOOL:		
Maintenance	\$43,692 55	\$12,692 08
Hospital and equipment.....	3,606 39	1,987 09
Repairs and improvements.....	1,242 45	2,138 07
Greenhouse	5,962 54	6,083 26
Totals.....	\$54,413 93	\$22,850 45
STATE SCHOOL FOR GIRLS:		
General	\$40,652 14	\$1,187 70
WASHINGTON STATE REFORMATORY:		
Maintenance	\$61,687 11	\$13,824 13
Buildings and equipment.....	13,047 05	7 25
Farm equipment and stock.....	3,172 94	34
Totals.....	\$77,907 10	\$13,831 72

*Balance not reverting.

Expenditures and Reversions—Continued.

INSTITUTIONS AND FUNDS	Expended Oct. 1, 1914, to March 31, 1915	Reverted to State Treasury April 1, 1915
CAPITOL BUILDING AND GROUNDS:		
Maintenance	\$9,474 73	\$290 24
Sidewalks and improvements	931 71	2,878 52
Repair of shed		190 00
Totals.	\$10,406 44	\$3,359 76
TEMPLE OF JUSTICE:		
Maintenance	\$10,878 93	\$3,729 24
STATE BOARD OF CONTROL:		
Salaries	\$4,500 00	\$322 57
Salaries of employees. . .	2,566 85	2,720 90
Traveling expenses	1,029 89	428 97
Office expenses	1,528 09	494 74
Printing ..	2,807 77	610 45
Totals	\$12,432 90	\$4,577 63
Transportation of Convicts....	\$16,400 93	
Tuberculosis Hospitals	7,358 55	\$86,001 50
State Powder Factory	7 45	49,300 09
Grand totals	\$361,688 75	\$790,365 93

FINANCIAL REPORT.

EXPENDITURES AND BALANCES, APRIL 1, 1915, TO
SEPTEMBER 30, 1916.

Statement Showing Amounts Appropriated by the Legislature of 1915,
Available April 1, 1915, Amounts Expended from April 1, 1915, to
September 30, 1916, and Balances on Hand October 1, 1916.

Table No. 2.

INSTITUTIONS AND FUNDS	Appropriations	Expended April 1, 1915, to September 30, 1916	Balance October 1, 1916
WESTERN STATE HOSPITAL:			
Maintenance, etc.	\$460,000 00	\$296,929 36	\$166,070 64
Furniture and carpets.....	1,000 00	498 99	511 01
Library	500 00	890 78	119 22
Cow barn, repairs and improvements, etc.	20,000 00	12,862 90	7,137 10
Total.....	\$481,500 00	\$307,662 08	\$173,837 97
EASTERN STATE HOSPITAL:			
Maintenance, etc.	\$416,000 00	\$239,406 30	\$176,593 70
General repairs and improvements.....	10,000 00	9,996 04	8 96
Furniture, carpets and bedding.....	7,000 00	3,646 15	3,353 85
Enlarging water system.....	6,000 00	5,997 96	2 04
Boiler, complete and in place.....	8,500 00	8,456 85	43 65
Remodeling old buildings at Feeble- Minded Institution	2,500 00		2,500 00
Amusement and library	1,000 00	979 30	20 70
Purchase of land.....	30,000 00	30,000 00	
Total.....	\$481,000 00	\$296,482 10	\$182,517 90
NORTHERN STATE HOSPITAL:			
Maintenance, etc.	\$273,000 00	\$163,307 31	\$109,192 69
Two ward buildings.....	123,000 00	75,096 11	52,303 89
Auditorium	30,000 00	22,239 72	7,731 28
Farm buildings	15,000 00	14,999 91	90
Laundry buildings and equipment.....	15,000 00	13,906 78	1,094 22
Refrigerator plant	8,000 00	6,496 64	1,513 46
Library	500 00	497 61	2 39
Repairs and improvement and miscellaneous	26,300 00	24,355 27	1,944 73
Total.....	\$496,800 00	\$322,017 25	\$178,782 75
INSTITUTION FOR FEEBLE MINDED:			
Maintenance	\$210,000 00	\$131,710 26	\$78,289 74
Buildings, etc.	296,000 00	229,344 43	66,655 57
Purchase of land.....	16,000 00	16,000 00	
Total.....	\$522,000 00	\$377,054 69	\$144,945 31
STATE SOLDIERS' HOME AND COLONY:			
Maintenance (State)	\$76,000 00	\$36,129 72	\$39,870 28
Maintenance (U. S.).....	66,902 09	46,507 03	20,395 06
Maintenance of colony.....	35,000 00	21,316 86	13,683 14
Library	200 00	64 20	135 80
Repairs and improvements.....	12,000 00	11,027 06	972 94
Totals.....	\$129,200 00	\$115,044 87	\$75,067 22

Expenditures and Balances—Continued.

INSTITUTIONS AND FUNDS	Appropriations	Expended April 1, 1915, to September 30, 1916	Balance October 1, 1916
WASHINGTON VETERANS' HOME:			
Maintenance (State)	\$140,000 00	\$70,281 99	\$69,718 01
Maintenance (U. S.)	58,892 42	47,106 16	11,787 26
Repairs and improvements	21,000 00	20,642 70	357 30
Totals	\$161,000 00	\$138,029 85	\$23,970 15
STATE SCHOOL FOR DEAF:			
Maintenance	\$94,000 00	\$59,047 37	\$34,952 63
Manual training, repairs and improvements	5,500 00	5,496 66	3 34
Traveling expenses to Gallaudet	2,000 00	1,227 90	772 10
Library	200 00	199 59	41
Totals	\$101,700 00	\$65,971 52	\$35,728 48
STATE SCHOOL FOR BLIND:			
Maintenance	\$43,000 00	\$27,927 73	\$15,072 27
Manual training supplies	1,200 00	580 92	619 08
Library	1,000 00	411 31	588 19
Summer school for adults	800 00	798 81	1 19
Repairs and improvements	1,000 00	791 99	208 01
School, administration buildings and furnishings	75,000 00	59,990 12	15,009 88
Totals	\$122,000 00	\$90,501 38	\$31,498 62
STATE PENITENTIARY:			
Maintenance	\$277,000 00	\$173,566 75	\$103,434 25
Repairs and improvements	10,000 00	7,291 58	2,708 42
Library	500 00	355 74	144 26
Salary of chaplain	2,400 00	1,700 00	700 00
Operation of jute mill, etc.	275,000 00	127,413 84	147,586 16
Totals	\$564,900 00	\$310,326 91	\$254,573 09
STATE TRAINING SCHOOL:			
Maintenance	\$100,000 00	\$74,006 42	\$25,993 58
Repairs and improvements, etc.	7,500 00	7,302 00	198 00
Lumber, seeds, etc.	12,000 00	7,599 35	4,400 65
Amusements and athletics	1,000 00	692 18	307 82
Library	500 00	205 77	294 23
Totals	\$121,000 00	\$89,805 72	\$31,194 28
STATE SCHOOL FOR GIRLS:			
Maintenance	\$56,000 00	\$35,268 75	\$20,731 25
One new building and equipment	60,000 00	58,713 08	1,286 92
Stock, farm machinery, etc.	8,500 00	6,380 16	2,119 84
Library and amusement	500 00	281 11	218 89
Totals	\$125,000 00	\$100,643 10	\$24,356 90

Expenditures and Balances—Continued.

INSTITUTIONS AND FUNDS	Appropriations	Expended April 1, 1915, to September 30, 1916	Balance October 1, 1916
WASHINGTON STATE REFORMATORY:			
Maintenance	\$219,000 00	\$152,066 09	\$66,933 91
Farm equipment and stock.....	7,500 00	4,339 91	3,160 09
Storehouse	17,000 00	12,900 17	4,099 83
Installation of oil-burning system.....	2,500 00	.....	2,500 00
Completing main building.....	4,000 00	3,815 22	184 78
Manual training and shop equipment....	4,000 00	2,265 77	1,734 23
General repairs and improvements.....	7,500 00	7,374 55	125 45
Clearing land	10,000 00	5,099 44	4,900 56
Waterworks	10,000 00	258 25	9,746 75
Sewers	1,500 00	1,197 18	302 82
Sidewalks	1,000 00	624 71	375 29
Salary of chaplain.....	2,400 00	1,800 00	600 00
Library and entertainments.....	1,100 00	788 81	311 19
Duplicate lighting system.....	8,000 00	.....	3,000 00
Totals.....	\$290,500 00	\$192,525 10	\$97,974 90
CAPITOL BUILDING AND GROUNDS:			
Maintenance	\$30,000 00	\$21,698 81	\$8,301 19
Repairs and improvements.....	5,000 00	2,288 72	2,711 28
Totals.....	\$35,000 00	\$23,987 53	\$11,012 47
STATE BOARD OF CONTROL:			
Salaries of members.....	\$18,000 00	\$13,250 00	\$4,750 00
Salaries of employees.....	10,200 00	7,345 41	2,854 59
Traveling expenses	4,800 00	3,585 32	1,264 68
Office expenses, postage, etc.....	3,000 00	1,598 24	1,401 76
Printing	7,500 00	2,294 90	5,205 10
Totals.....	\$43,500 00	\$28,023 87	\$15,476 13
TEMPLE OF JUSTICE:			
Maintenance	\$12,000 00	\$7,962 70	\$4,037 30
Transportation of convicts.....	\$62,500 00	\$40,036 57	\$22,463 43
Parole department	25,000 00	14,039 04	10,960 96
Deportation of alien insane.....	75,000 00	2,720 50	72,279 50
Grand totals.....	\$8,968,394 51	\$2,524,834 73	\$1,443,559 78

Table No. 3.

TABLE SHOWING AVERAGE DAILY POPULATION, EXPENSE OF OPERATION, PER CAPITA COST FOR OPERATION, AND TOTAL EXPENDITURES FOR ALL PURPOSES FOR THE SEVERAL INSTITUTIONS UNDER THE STATE BOARD OF CONTROL DURING THE BIENNIIUM OCTOBER 1, 1914, TO SEPTEMBER 30, 1916.

INSTITUTION	Daily Average Population	Total Expenditures for Operation	Cash Receipts Remitted to State Treasurer	Total Net Cost of Operation	Daily Per Capita Cost for Operation	Expenditure Other Than Maintenance	Total Expenses for All Purposes
Western State Hospital.....	1,377.17	\$427,605 77	\$2,314 75	\$425,291 02	.422	\$29,592 22	\$457,127 99
Eastern State Hospital.....	1,070.62	341,100 07	6,051 92	335,038 15	.402	67,696 21	408,786 23
Northern State Hospital.....	537.78	212,319 04	413 98	211,905 11	.539	187,678 54	399,997 53
Institution for Feeble Minded.....	438.38	170,063 02	607 00	169,456 02	.526	296,739 95	466,882 97
State Soldiers' Home.....	310.87	113,712 01	90 00	113,622 01	.500	44,276 83	157,968 39
Washington Veterans' Home.....	500.36	159,802 58	277 51	158,525 07	.433	29,766 72	185,569 30
State School for Deaf.....	90.40	81,205 48	51 35	81,154 13	1.11	8,464 46	89,699 04
State School for Blind.....	40.27	37,367 04	9 00	37,358 04	1.26	64,945 88	102,312 92
State Penitentiary.....	744.61	237,462 86	1,372 42	236,090 44	.433	150,406 35	387,871 21
State Training School.....	194.16	117,608 97	79 20	117,529 77	.828	26,610 68	144,219 65
State School for Girls.....	*85.55	35,268 75	248 83	35,019 92	.745	106,026 49	141,295 24
State Reformatory.....	412.44	213,763 20	.....	213,763 20	.708	56,679 00	270,432 20
Totals.....	5,811.61	\$2,146,298 79	\$11,525 91	\$2,134,772 88	.....	\$1,005,854 88	\$3,212,153 67
Capitol buildings and grounds.....							\$24,393 97
Temple of Justice.....							18,841 68
Board of Control.....							40,447 07
Transportation of convicts, insane, etc.....							56,506 56
Parole department.....							14,089 04
Deportation of alien insane.....							2,720 50
Tuberculosis hospital.....							7,398 55
Powder factory.....							7 45
Grand Total.....							\$3,386,468 46

* 18 months.

Table No. 4.

AVERAGE DAILY POPULATION AND AVERAGE DAILY COST PER CAPITA 1900-1910.

BIBLIOGRAPHY	Eastern State Hospital		Northern State Hospital		Institution for Feeble Minded	
	Daily Average Population	Daily Per Capita Cost Maintenance	Daily Average Population	Daily Per Capita Cost Maintenance	Daily Average Population	Daily Per Capita Cost Maintenance
September 30, 1902.....	365.80	.4150	.....	.....	.....	.....
September 30, 1904.....	368.96	.4104	.....	.....	.....	.....
September 30, 1906.....	409.71	.4174	.....	.....	.....	.....
September 30, 1908.....	542.74	.5156	.....	.....	180.85	.6189
September 30, 1910.....	681.90	.4553	.....	.....	198.08	.5914
September 30, 1912 (as corrected).....	826.46	.5136	.....	.....	198.23	.7005
September 30, 1914.....	989.69	.4903	.....	.....	245.83	.5412
September 30, 1916.....	1,070.62	.465	.....	.....	428.38	.530

AVERAGE DAILY POPULATION AND AVERAGE DAILY COST PER CAPITA 1900-1918.

BIENNium ENDING	State Soldiers' Home			Washington Veterans' Home			School for the Blind		
	Daily Average Population	Daily Per Capita Cost	Daily Per Capita Cost	Daily Average Population	Daily Per Capita Cost	Daily Per Capita Cost	Daily Average Population	Daily Per Capita Cost	Daily Per Capita Cost
September 30, 1902	190.95	.4715							
September 30, 1904	308.81	.4776							
September 30, 1905	264.89	.4303							
September 30, 1908	302.72	.5063							
September 30, 1910	305.62	.5748							
September 30, 1912 (as corrected)	312.41	.5223							
September 30, 1914	295.78	.5673							
September 30, 1916	310.67	.500							
				166.05	.7405	1.206	23.50	1.495	
				313.96	.6168	1.0372	38.93	1.1486	
				500.35	.434	1.11	40.27	1.26	

Table No. 4—Continued.
AVERAGE DAILY POPULATION AND AVERAGE DAILY COST PER CAPITA 1900-1916.

BIENNium ENDING	State Penitentiary		State Training School		State School for Girls		State Reformatory	
	Daily Average Population	Daily Per Capita Cost Maintenance	Daily Average Population	Daily Per Capita Cost Maintenance	Daily Average Population	Daily Per Capita Cost Maintenance	Daily Average Population	Daily Per Capita Cost Maintenance
September 30, 1902.....	514.09	.3402	168.77	.3323				
September 30, 1904.....	631.57	.3243	152.24	.3316				
September 30, 1906.....	758.39	.3023	184.33	.3205				
September 30, 1908.....	853.23	.3065	216.13	.4735				
September 30, 1910.....	831.87	.3512	238.05	.5173				
September 30, 1912 (as corrected).....	686.92	.5017	289.79	.6561				
September 30, 1914.....	749.68	.4382	308.96	.5492				
September 30, 1916.....	744.61	.436	194.16	.828	† 55.55	.750	152.00	.7162
							330.80	.6561
							353.23	.7306
							412.44	.708

† 18 months. Girls moved to Grand Mound December 23, 1914, but their maintenance cost was charged to State Training School until March 31, 1915.

Table No. 5.
DAILY AVERAGE POPULATION.

INSTITUTIONS	1906-1908	1908-1910	1910-1912	1912-1914	1914-1916
Western State Hospital.....	1,058.72	1,287.06	1,380.96	1,997.54	1,377.17
Eastern State Hospital.....	542.74	681.90	826.44	939.69	1,070.63
Northern State Hospital.....			194.50	254.42	537.78
Institution for Feeble Minded..	130.85	158.08	198.23	245.83	438.38
State Soldiers' Home.....	302.72	365.62	332.41	396.76	310.87
Washington Veterans' Home....		127.23	168.06	313.93	500.36
State School for Deaf.....	*126.96	*136.13	81.00	96.32	99.40
State School for Blind.....			23.36	39.93	40.27
State Penitentiary.....	853.23	831.37	665.92	749.63	744.61
State Training School.....	216.13	233.05	269.79	308.96	194.16
State School for Girls.....					185.55
State Reformatory.....		182.00	330.80	358.23	412.44
Total daily average population.....	3,226.37	3,973.04	4,411.51	4,997.24	5,811.61

* Includes School for Blind, schools divided April 1, 1909.

† Institution opened April 1, 1911.

‡ Average for 18 months commencing April 1, 1915.

Table No. 6.
CENSUS OF STATE INSTITUTIONS SEPTEMBER 30, 1916.

INSTITUTIONS	Employees (Not Inmates)	Employees (Families)	INMATES	
			Present	Present and Absent
Western State Hospital.....	123	13	1,326	1,463
Eastern State Hospital.....	106	2	1,068	1,142
Northern State Hospital.....	70	1	600	692
Institution for Feeble Minded.....	63	1	539	545
State Soldiers' Home.....	22	3	262	467
State Soldiers' Colony.....	2		142	179
Washington Veterans' Home.....	36		534	753
State School for Deaf.....	33		123	136
State School for Blind.....	23	2	56	56
State Penitentiary.....	48	5	662	795
State Training School.....	23		125	503
State School for Girls.....	17		98	164
State Reformatory.....	44	6	320	1,540
Totals.....	619	33	5,915	8,435

Table No. 7.

MISCELLANEOUS FUND.**Cash Receipts Remitted to State Treasurer for Sale of Products and Discarded Materials.**

Western State Hospital.....	\$2,314 75
Eastern State Hospital.....	6,061 92
Northern State Hospital.....	413 93
Institution for Feeble Minded.....	607 00
State Soldiers' Home.....	90 00
Veterans' Home	277 51
State School for Deaf.....	51 35
State School for Blind.....	9 00
State Penitentiary	1,372 42
State Training School	79 20
State School for Girls.....	248 83
State Reformatory .....	.....
Total.....	\$11,525 91

Table No. 8.

FARM AND GARDEN PRODUCTS.**Value of Farm and Garden Products for Biennium 1914-1916.**

Western State Hospital.....	\$100,946 03
Eastern State Hospital.....	82,134 87
Northern State Hospital.....	28,082 83
Institution for Feeble Minded.....	13,678 44
State Soldiers' Home.....	15,385 03
Veterans' Home	1,143 11
State School for Deaf.....	867 57
State School for Blind.....	280 24
State Penitentiary	20,350 21
State Training School	14,280 48
State School for Girls.....	3,990 72
State Reformatory	25,295 83
Total.....	\$815,435 36

Table No. 10.

**TABLE SHOWING TOTAL VALUE OF STATE PROPERTY UNDER
SUPERVISION OF THE STATE BOARD OF CONTROL,
SEPTEMBER 30, 1916.**

	Real Estate	Buildings	All Other	Total
State House and Temple of Justice	\$235,000 00	\$899,000 00	\$11,297 00	\$1,135,297 00
Western State Hospital.....	70,856 00	689,202 84	151,925 17	761,483 01
Eastern State Hospital.....	73,969 50	518,074 00	98,770 88	685,814 33
Northern State Hospital.....	101,650 44	620,873 99	94,008 00	816,527 43
Institution for Feeble Minded	45,295 57	519,703 96	96,504 54	661,504 07
State Soldiers' Home.....	27,525 00	46,435 00	25,435 00	99,395 00
Washington Veterans' Home.	23,600 00	218,806 26	74,220 37	316,626 63
State School for Deaf.....	7,423 00	82,392 00	31,097 97	120,912 97
State School for Blind.....	7,000 00	122,217 00	13,530 37	142,547 37
State Penitentiary	29,398 70	508,712 74	253,387 94	786,499 38
State Training School.....	43,600 00	135,359 03	23,100 46	202,059 49
State School for Girls.....	28,749 47	138,834 20	20,909 12	188,491 80
State Reformatory	53,786 11	529,327 76	73,365 77	656,478 64
Totals.....	\$747,356 79	\$4,863,968 73	\$662,346 55	\$6,573,642 12

Northern State Hospital:

OPERATION (Including salaries and wages).....		\$301,125 00
MAINTENANCE (Repairs and upkeep).....		23,500 00
CAPITAL OUTLAYS, itemized as follows:		
One male ward building.....	\$70,000 00	
One wing to complete female ward building.....	23,000 00	
One tubercular ward building.....	40,000 00	
One nurses' home.....	37,000 00	
One commissary and stores building.....	17,500 00	
One piggery.....	3,000 00	
One greenhouse.....	2,000 00	
Permanent power house and equipment.....	35,750 00	
Household furniture and equipment.....	10,000 00	
Concrete supports for main water pipe, etc.....	9,655 00	
Storm sewer.....	4,000 00	
Extending and enlarging water mains.....	4,000 00	
Machine shop equipment.....	1,500 00	
Carpenter shop equipment.....	750 00	
Laundry equipment.....	2,500 00	
Surgery equipment, including X-ray machine.....	2,500 00	
Hydro-therapeutic equipment.....	8,000 00	
Additional filter bed.....	3,000 00	
Library and equipping auditorium.....	1,500 00	
Dredging Hansen creek.....	10,000 00	340,655 00
DEPORTATION to other states of non-resident insane patients.....		5,000 00
Total.....		\$670,280 00

Institution for Feeble Minded:

OPERATION (Including salaries and wages).....		\$259,220 00
MAINTENANCE (Repairs and upkeep).....		6,800 00
CAPITAL OUTLAYS, itemized as follows:		
Two annexes to custodial buildings.....	\$90,000 00	
Furniture.....	3,000 00	
Material for poultry houses and pig pens.....	1,000 00	
Dairy barn and two silos.....	12,000 00	
Cold storage building and shop annex to boiler house.....	7,000 00	
Cold storage plant.....	3,500 00	
Pipe and fittings for connecting five buildings with central heating plant.....	5,000 00	
Material for north tunnel and laterals.....	3,000 00	
Coal bunkers.....	1,500 00	
Material for window screens.....	500 00	
Filter bed.....	700 00	
Walks, roads and grounds.....	2,000 00	
Equipment for kitchen and bakery.....	1,000 00	
Equipment for work shop.....	850 00	
Farm implements.....	350 00	
Motor truck.....	3,000 00	
Miscellaneous equipment.....	320 00	
Library.....	200 00	124,920 00
Total.....		\$380,940 00

State Soldiers' Home:

OPERATION (Including salaries and wages).....		\$35,000 00
MAINTENANCE (Repairs and upkeep).....		3,975 00
CAPITAL OUTLAYS, itemized as follows:		
Clearing 10 acres land.....	\$2,000 00	
Hospital building.....	45,000 00	
Two-story barracks building.....	40,000 00	
Remodeling present hospital building for barracks....	1,500 00	
Surgeon's cottage.....	2,000 00	
Feeding pen and slaughter house.....	1,000 00	
Office equipment.....	250 00	
Household furniture and equipment.....	1,450 00	
Auto truck.....	1,600 00	94,800 00
Total.....		\$183,775 00
Gifts of the State Soldiers' Home.....		\$45,000 00

Washington Veterans' Home:

OPERATION (Including salaries and wages).....		\$124,000 00
MAINTENANCE (Repairs and upkeep).....		11,800 00
CAPITAL OUTLAYS, itemized as follows:		
Purchase of strip of land adjoining institution grounds on west.....	\$6,800 00	
Women's building.....	25,000 00	
Scenery to assembly hall.....	2,000 00	
Additional boiler.....	6,500 00	
Utility pump, etc.....	1,000 00	
Auto truck.....	1,000 00	
Auto.....	1,500 00	
Escapes.....	500 00	
Stile bridge to cemetery.....	3,000 00	
Ice and vault furniture.....	300 00	
Household furniture and equipment.....	5,000 00	
Wary.....	500 00	52,900 00
Total.....		\$183,700 00

School for the Deaf:

OPERATION (Including salaries and wages).....		\$91,980 00
MAINTENANCE (Repairs and upkeep).....		2,700 00
CAPITAL OUTLAYS, itemized as follows:		
Building.....	\$35,000 00	
for same.....	5,000 00	
Administration building.....	5,000 00	
for print shop.....	2,500 00	
tools for manual training.....	520 00	
.....	500 00	
.....	200 00	48,720 00
EXPENSES STUDENTS ATTENDING GALLAUDET COLLEGE.....		2,000 00
Total.....		\$145,400 00

State School for the Blind:

OPERATION (Including salaries and wages).....		\$52,560 00
MAINTENANCE (Repairs and upkeep).....		1,000 00
CAPITAL OUTLAYS, itemized as follows:		
Purchase of one acre of land adjoining grounds on east	\$5,000 00	
Purchase of four and a fraction acres adjoining grounds on west.....	5,000 00	
Kitchen building and equipment.....	17,000 00	
Shop row	18,000 00	
Additional boiler	2,500 00	
Retaining wall and sidewalks.....	1,000 00	
Finishing and equipping plunge in new building.....	4,000 00	
Installation of vacuum cleaner.....	500 00	
Pipe organ	2,000 00	
Domestic Science equipment.....	500 00	
Gymnasium equipment	180 00	
Typewriting and sewing machines.....	160 00	
Musical instruments and library.....	1,500 00	
Wrecking old building.....	1,500 00	58,840 00
MANUAL TRAINING SUPPLIES.....		800 00
Total.....		\$113,200 00

State Penitentiary:

OPERATION (Including salaries and wages).....		\$250,400 00
MAINTENANCE (Repairs and upkeep).....		14,000 00
CAPITAL OUTLAYS, itemized as follows:		
Women's building	\$10,000 00	
Steel roof to cell wings and dining room.....	10,000 00	
Installation of toilets in cells.....	7,000 00	
Forced ventilation in cells.....	2,000 00	
Additional pumping facilities.....	5,000 00	
Increasing height of stockade wall.....	4,000 00	
Farm building	1,200 00	
Office furniture and equipment.....	700 00	
Household furniture and equipment.....	1,500 00	
Utility equipment	400 00	
Miscellaneous equipment	200 00	
Live stock	2,500 00	
Library	500 00	45,000 00
OPERATION OF JUTE MILL.....	\$51,940 00	\$309,400 00
PURCHASE OF JUTE (Approx. 5,000 bales).....	150,000 00	201,940 00
Total.....		\$511,340 00

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State Training School:

OPERATION (Including salaries and wages).....		\$127,850
MAINTENANCE (Repairs and upkeep).....		8,200
CAPITAL OUTLAYS, itemized as follows:		
Clearing 50 acres of land	\$5,000 00	
Draining tillable land.....	2,000 00	
Extension of walks and driveways.....	800 00	
Gymnasium	20,000 00	
Two double cottages.....	100,000 00	
Boiler	800 00	
Range for kitchen.....	800 00	
Equipment for cottages.....	10,000 00	
Equipment for gymnasium.....	2,000 00	
50 steel lockers.....	1,250 00	
Utility equipment	700 00	
Laundry machinery	1,400 00	
Additional boiler with Parkinson furnace.....	4,000 00	
Remodeling bakery and new oven.....	2,000 00	
Library and print shop.....	100 00	150,750
Total.....		\$236,800

State School for Girls:

OPERATION (Including salaries and wages).....		\$71,500
MAINTENANCE (Repairs and upkeep).....		2,000
CAPITAL OUTLAYS, itemized as follows:		
Clearing and fencing	\$3,000 00	
Bulkheading at Chehalis river.....	3,000 00	
Three bridges	1,500 00	
Cement walks	4,000 00	
Post lamps	1,050 00	
Additional cottage	45,000 00	
Furnishing and equipping same.....	5,000 00	
Fireproof school building and auditorium.....	85,000 00	
Greenhouse	1,500 00	
Bungalow for engineer and garage.....	2,000 00	
Cover over entrance to Granger Hall.....	700 00	
Addition to administration building.....	5,500 00	
Electric plant	13,000 00	
Power house and pump house.....	4,000 00	
Drilled well	200 00	
Addition to live stock.....	1,200 00	
Farm machinery	100 00	
Library and moving picture machine.....	500 00	
Automobile	800 00	
Furniture and equipment.....	2,500 00	180,000
Total.....		\$254,100

Washington State Reformatory:

OPERATION (Including salaries and wages).....		\$205,475 00
SALARY OF CHAPLAIN.....		2,400 00
CAPITAL OUTLAYS, itemized as follows:		
Farm stock and equipment.....	\$7,500 00	
Domestic building addition.....	35,200 00	
Water system	80,000 00	
Oil storage equipment.....	750 00	
Signal system motor set.....	250 00	
Refrigerating plant	4,500 00	
Inmates' and Officers' kitchen equipment.....	4,653 00	
Manual training and shop equipment.....	6,800 00	
Land clearing	4,000 00	
Auto truck	8,000 00	
Transmission cables and switchboard extension.....	8,500 00	
Planking stockade wall.....	1,000 00	
Library and piano.....	2,400 00	153,063 00
Total.....		\$360,928 00

Capitol Building and Grounds:

OPERATION (Salaries, services and Material).....	\$33,500 00
MAINTENANCE (Repairs and upkeep).....	8,500 00
Total.....	\$42,000 00

Temple of Justice:

OPERATION (Salaries, services and material).....	\$16,500 00
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Transportation:

Of convicts, incorrigibles and insane, including salaries and traveling expenses of guards and attendants.....	\$65,000 00
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Parole Department

\$35,000 00

Deportation of Insane Aliens:

Including salary and traveling and incidental expenses of agent.....	\$30,000 00
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State Board of Control:

Salaries of members.....	\$18,000 00
Salaries of employees.....	12,400 00
Office expenses	3,000 00
Traveling expenses	4,800 00
Printing fund	7,500 00
Total.....	\$45,700 00

GRAND TOTAL OF APPROPRIATIONS REQUESTED..... \$4,655,157 00

STATEMENT OF VISITATION TO INSTITUTIONS BY THE MEMBERS FROM OCTOBER 1, 1914, TO SEPTEMBER 30, 1916.

Western State Hospital, Fort Steilacoom.

YEAR	WHEN MADE	BY WHOM MADE
14.....	October 31	Jones
	November 2, 3.....	Jones
	November 17	Morse
	December 4.....	Jones
	December 28, 29.	Morse, Skaggs
15.....	February 5	Skaggs
	May 31	Morse
	June 17, 18, 19.....	Morse, Skaggs, Cochran
	June 23	Morse
	August 18	Morse
	September 6	Morse
	September 7	Morse, Skaggs, Cochran
	November 16	Cochran
	December 1, 3.....	Morse
16.....	January 14, 15.....	Morse, Cochran
	January 29	Morse
	March 28, 29, 30.....	Morse
	April 1	Morse
	April 30	Morse
	May 14	Cochran
	May 15	Skaggs
	May 21, 30, 31.....	Morse
	June 3, 4, 5.....	Skaggs
	June 8	Morse
	June 11	Skaggs
	June 15	Morse
	July 27, 28.....	Cochran
	July 30	Morse
	August 11	Skaggs
	August 12	Morse, Cochran
	August 13, 15.....	Morse
	August 18	Skaggs
	August 20	Morse
	August 21	Skaggs
	August 27	Morse
	September 3	Morse, Skaggs
	September 4	Skaggs
	September 12, 13.....	Morse

Eastern State Hospital, Medical Lake.

YEAR	WHEN MADE	BY WHOM MADE
14.....	October 12, 13, 15.....	Jones, Morse, Ross
15.....	February 3, 4, 5, 8.....	Jones
	April 20, 21, 22.....	Morse, Skaggs
	June 20	Cochran
	July 27	Morse, Skaggs, Cochran
	July 28	Morse, Skaggs
	September 12	Cochran
	October 28	Morse, Skaggs, Cochran
	December 23	Skaggs, Cochran
16.....	January 26	Cochran
	February 25	Morse, Skaggs
	April 15	Morse, Skaggs, Cochran
	April 16	Cochran
	June 22, 23.....	Skaggs
	July 14, 15.....	Morse, Cochran

STATEMENT OF VISITATION TO INSTITUTIONS—Continued.

Northern State Hospital, Sedro Woolley.

YEAR	WHEN MADE	BY WHOM MADE
1914.....	October 1	Jones, Morse, Ross
	November 18, 19.....	Jones, Morse
1915.....	January 5, 6.....	Morse, Skaggs
	June 4	Morse, Skaggs, Cochran
	August 15, 16.....	Morse, Skaggs, Cochran
	September 4, 5.....	Skaggs
	December 7, 8.....	Morse, Skaggs, Cochran
1916.....	January 18, 19.....	Cochran
	March 10	Skaggs, Cochran
	May 18	Morse, Skaggs, Cochran
	July 10	Skaggs
	August 18	Morse, Cochran

Institution for Feeble Minded, Medical Lake.

YEAR	WHEN MADE	BY WHOM MADE
1914.....	November 7, 9.....	Jones, Morse
	December 19	Jones, Morse, Skaggs
1915.....	February 5, 6.....	Jones
	April 23, 24.....	Morse, Skaggs
	June 27	Cochran
	July 27	Morse, Skaggs, Cochran
	September 12	Cochran
	October 29	Morse, Skaggs
	December 22	Skaggs, Cochran
1916.....	April 16	Cochran
	June 22, 23.....	Skaggs
	July 14	Morse
	July 15	Morse, Cochran

State Soldiers' Home, Orting.

YEAR	WHEN MADE	BY WHOM MADE
1914.....	December 30	Morse, Skaggs
1915.....	April 29, 30.....	Morse, Skaggs
	May 31	Cochran
	September 3	Morse, Cochran
	September 13.....	Morse, Skaggs
	October 17	Morse
	November 15	Morse, Skaggs, Cochran
1916.....	January 12	Morse
	January 18	Morse, Cochran
	May 21	Morse
	May 30	Cochran
	June 7	Morse, Skaggs
	August 11	Cochran
	September 18	Morse, Skaggs

STATEMENT OF VISITATION TO INSTITUTIONS—Continued.
Veterans' Home, Retail.

YEAR	WHEN MADE	BY WHOM MADE
.....	November 27, 28.....	Jones
.....	January 4	Morse, Skaggs
.....	March 14	Morse, Skaggs
.....	May 31	Skaggs
.....	June 2, 3.....	Morse, Skaggs, Cochran
.....	July 6	Morse, Cochran
.....	October 17	Skaggs
.....	November 24	Skaggs
.....	December 4, 5, 6.....	Morse, Skaggs, Cochran
.....	January 11, 12.....	Cochran
.....	March 7, 8.....	Morse, Skaggs, Cochran
.....	May 16	Skaggs, Cochran
.....	May 30	Skaggs
.....	July 8	Morse
.....	August 3	Skaggs
.....	August 16	Cochran

State School for the Deaf, Vancouver.

YEAR	WHEN MADE	BY WHOM MADE
.....	December 9	Jones, Morse, Skaggs
.....	May 6	Morse, Skaggs, Cochran
.....	May 18	Skaggs
.....	June 7, 8, 10.....	Cochran
.....	August 25	Morse, Skaggs, Cochran
.....	September 8	Cochran
.....	November 18	Morse, Skaggs, Cochran
.....	January 4, 5	Cochran
.....	February 18	Morse, Skaggs, Cochran
.....	March 6	Skaggs
.....	May 8	Skaggs
.....	May 9, 10.....	Morse, Skaggs, Cochran
.....	May 26, 27, 28.....	Morse
.....	June 13, 14.....	Cochran
.....	August 8	Morse
.....	August 4	Morse, Cochran
.....	August 28	Morse, Skaggs, Cochran
.....	August 29	Cochran

State School for the Blind, Vancouver.

.....	May 8	Morse, Skaggs, Cochran
.....	May 24	Skaggs
.....	June 7, 8.....	Cochran
.....	August 24, 25.....	Morse, Skaggs, Cochran
.....	September 8	Cochran
.....	October 22	Morse, Skaggs, Cochran
.....	November 19, 20.....	Morse, Skaggs, Cochran
.....	January 3, 4, 5.....	Cochran
.....	February 3, 17.....	Morse, Skaggs, Cochran
.....	May 10	Morse, Skaggs, Cochran
.....	May 26, 27, 28.....	Morse
.....	June 12	Cochran
.....	July 25	Skaggs
.....	August 3, 4.....	Morse, Cochran
.....	August 23, 24.....	Morse, Skaggs, Cochran
.....	August 29	Morse, Skaggs

STATEMENT OF VISITATION TO INSTITUTIONS—Continued.
State Penitentiary, Walla Walla.

YEAR	WHEN MADE	BY WHOM MADE
1914.....	October 15, 16.....	Jones, Morse, Ross
	December 16, 17.....	Jones, Morse, Skaggs
1915.....	February 17, 18, 19, 20, 21, 22, 23, 24.....	Skaggs
	April 13, 14, 16, 17.....	Morse, Skaggs
	May 20, 21, 22.....	Morse, Skaggs, Cochran
	June 23, 24.....	Cochran
	July 20, 21, 22, 23, 24, 25.....	Morse, Skaggs, Cochran
	August 8.....	Cochran
	September 9.....	Cochran
	October 19.....	Cochran
	October 20, 21, 23, 24, 25.....	Morse, Skaggs, Cochran
	October 31.....	Cochran
	December 13.....	Skaggs, Cochran
	December 14, 15, 16, 17.....	Morse, Skaggs, Cochran
	December 18, 19.....	Skaggs, Cochran
1916.....	January 24.....	Cochran
	February 23, 24.....	Morse, Skaggs, Cochran
	February 25.....	Cochran
	April 17.....	Morse, Cochran
	April 18, 19, 20, 21.....	Morse, Skaggs, Cochran
	April 22.....	Cochran
	June 1, 2, 3.....	Cochran
	July 17.....	Morse, Skaggs
	July 18, 19, 20, 21, 22.....	Morse, Skaggs, Cochran
	July 23.....	Skaggs
	September 1.....	Cochran

State Training School, Chehalis.

YEAR	WHEN MADE	BY WHOM MADE
1914.....	November 16.....	Jones
	December 3.....	Jones, Morse, Skaggs
	December 4.....	Skaggs
	December 21.....	Morse, Skaggs
1915.....	January 4, 5, 6, 7, 8, 9, 11, 12, 13.....	Jones
	February 21.....	Morse
	March 7.....	Morse
	April 28.....	Morse, Skaggs
	June 14, 15, 16.....	Morse, Skaggs, Cochran
	July 2.....	Morse
	July 15.....	Morse, Cochran
	August 11.....	Morse
	August 26.....	Morse, Skaggs, Cochran
	September 1.....	Morse
	October 12, 13.....	Morse
	November 3.....	Morse, Skaggs
	November 30.....	Morse, Cochran
	December 1.....	Morse, Cochran
	December 2.....	Morse
1916.....	January 6.....	Morse, Skaggs, Cochran
	January 7.....	Morse, Cochran
	January 26.....	Morse
	February 10, 18.....	Morse
	March 2, 3, 27.....	Morse
	April 12.....	Morse
	May 13, 14, 15.....	Morse
	May 23, 24, 25.....	Morse, Skaggs, Cochran
	June 8, 9.....	Morse, Skaggs
	June 14, 15.....	Cochran
	June 22, 23.....	Morse
	July 28, 29.....	Morse
	August 5.....	Morse, Cochran
	August 26.....	Morse

STATEMENT OF VISITATION TO INSTITUTIONS—Continued.

State School for Girls, Grand Mound.

YEAR	WHEN MADE	BY WHOM MADE
	October 21	Jones
	October 29	Jones, Morse
	November 14	Jones, Morse
	November 22	Morse, Skaggs
	February 22	Morse
	April 6	Morse, Skaggs
	May 29	Morse, Skaggs, Cochran
	July 1	Morse
	July 16	Morse, Cochran
	August 11	Morse
	August 29	Morse, Skaggs, Cochran
	September 2	Morse
	October 18	Morse
	November 4	Morse, Skaggs
	November 9	Morse, Cochran
	December 1	Morse, Cochran
	January 7	Morse, Cochran
	January 27	Morse
	March 14	Morse, Skaggs, Cochran
	May 11	Morse, Skaggs, Cochran
	June 9	Morse, Skaggs
	June 15, 16	Morse
	June 16, 17	Cochran
	June 23, 29, 30	Morse
	July 3	Morse, Skaggs, Cochran
	July 29	Morse, Cochran
	August 6	Morse, Cochran
	August 26	Morse

Washington State Reformatory, Monroe.

YEAR	WHEN MADE	BY WHOM MADE
	October 8, 9, 10	Jones, Morse, Ross
	December 10, 11	Morse, Skaggs
	January 15	Skaggs
	March 25	Morse, Skaggs
	April 7, 8, 9	Morse, Skaggs
	May 18	Morse, Skaggs, Cochran
	June 26, 27	Skaggs
	July 7, 8, 9	Morse, Skaggs, Cochran
	August 10	Skaggs
	September 2, 3	Skaggs
	October 6, 7, 8	Morse, Skaggs, Cochran
	November 11	Morse, Skaggs, Cochran
	December 9	Morse, Skaggs, Cochran
	December 10, 11	Cochran
	December 29	Skaggs
	January 10, 11, 12, 19	Skaggs
	January 20, 21	Morse, Skaggs, Cochran
	January 28, 29	Skaggs
	February 7, 8	Skaggs
	March 9	Skaggs, Cochran
	April 6, 7	Morse, Skaggs, Cochran
	May 4, 17	Morse, Skaggs, Cochran
	July 6, 7	Morse, Skaggs, Cochran
	July 28, 29	Skaggs
	August 5, 6	Skaggs
	August 17	Morse, Skaggs, Cochran
	September 10, 11	Skaggs

GENERAL REPORT.

Two changes in the membership of this Board have occurred since the date of the last biennial report. Herman W. Ross resigned on December 1, 1914, and was succeeded by T. E. Skaggs. The term of H. T. Jones expired March 31, 1915, and W. H. Cochran was appointed as his successor, assuming office on May 1, 1915. Frank C. Morse became chairman on April 1, 1915.

By frequent visits, as will appear from a detailed statement elsewhere in this report, we have exercised close personal supervision of the work of all institutions. We have done our utmost to secure such co-operation between the different institutions as would prevail between the different departments of any great corporation. Success has attended our efforts in this regard. The results obtained have been most gratifying. The business operations have been standardized and rendered uniform, so far as the scope and diversity of the work would permit. The state's wards have been cared for in a most efficient manner at an average per capita cost less than that of the two previous bienniums, notwithstanding the fact that the prices of practically all commodities purchased have risen far above those prevailing in former years.

NEW BUILDINGS AND IMPROVEMENTS.

All new buildings, for which appropriations were made by the last legislature, have been completed or are nearing completion. In the preparation of plans for these structures we ever had before us the requirements of permanency and utility, while ornateness was not overlooked. Careful and continual inspection of material and workmanship has been made and we believe that the state has received full value for its money. The buildings are all substantial, architecturally beautiful, well adapted to the latest methods of institutional work, and the cost of their construction is much lower than we may expect in

near future, because all of the contracts were let before the rise in prices."

With the funds appropriated for repairs and improvements buildings erected in former years have been maintained in good condition and many permanent, valuable improvements have been made.

DEPORTATION OF ALIEN INSANE.

An appropriation of \$75,000 was made by the last legislature to be expended by this Board in deporting insane patients confined in our state hospitals who have been in the United States more than three years and, therefore, are not deportable at the expense of the federal government at the expense of the steamship companies by which they were transported to this country.

The act above referred to provides that the State Board of Control, in co-operation with the United States Bureau of Immigration, shall arrange for the deportation of all alien insane confined in our hospitals and "cause the cost and expense of transporting such alien insane persons to such point or points as may be designated by the United States Bureau of Immigration and the cost and expense of their care, guarding and maintenance while being transported thereto to be paid from the funds appropriated for that purpose." Immediately after the passage of this act we took the matter up with Honorable William M. White, United States Commissioner of Immigration, and endeavor to prosecute the work with vigor. The superintendents of our hospitals, as well as this Board, have co-operated with Mr. White in every detail, furnishing complete information of the foreign born patients, together with all information available, paying all expenses promptly, furnishing all assistance requested and doing everything within our power to repatriate the largest number possible. We have been able to repatriate 29 aliens at state expense, while relatives have been induced to take 10 others at their own expense.

The following steps are necessary in the repatriation of an alien by the state:

1. The patient must be willing to be deported. No person can be returned against his will.
2. Relatives or friends in the foreign country, who are willing to receive him, must be located.
3. Passports must be obtained from a foreign consul in the United States.
4. Passage must be obtained from some steamship company.

In the cases of Chinese and Japanese, paragraphs 2 and 3 are not applicable. There are none of these nationalities in our hospitals, however, who can be deported, 18 having been returned during this biennium.

The difficulties in effecting deportation are very numerous in normal times. There are much greater obstacles at the present time on account of the war in Europe. We feel, however, that the work done by this Board compares favorably with that of any other deportation bureau in the United States. New York is the pioneer in this work. In 1905 the legislature of that state created a state board of alienists, which has since been changed to the bureau of deportation. During the last year this board maintained a large force, including three medical examiners, interpreters, stenographers, etc. It has an appropriation of \$22,000 for the year, which biennially would be \$44,000. In addition to this overhead expense, it had an appropriation of \$40,000 as the actual expense of transportation for one year. With this substantially equipped and amply financed department, with its most favorable location and strong support from the benevolent institutions, we would naturally suppose that large results would have been obtained, but only 309 were deported in an entire year, although there was a population of 36,399 in their hospitals, of which 45 per cent. were foreign born. During the same year New Jersey deported 2, California 3 and Oregon 15. There are only a few other states engaging in this work and these have obtained very small results when the number of foreign born in their institutions is taken into consideration. Up to the present time we have ex-

ended from this appropriation only \$2,720.50. We are asking another appropriation of \$30,000 to be made for this work during the coming biennium. Should the war in Europe close we shall be able to deport a great many more than have been deported during the past biennium. We desire to call attention, however, to the fact that most of the work involved in repatriation is that which is preliminary to the actual transportation. The former appropriation made no provision for this part of the work. We have therefore requested that the appropriation be so made that we can employ a deportation agent who can give all of his time to the preliminary arrangements. We sincerely hope that our request in this matter will be granted.

BUDGET.

In the preparation of our budget for the ensuing biennium exceptional care has been taken in order that no amount might be requested except such as we deem essential for the proper conduct of the institutions. The funds estimated to be necessary for maintenance have been placed as low as safety and efficiency would permit. The cost of proposed buildings and special improvements have been furnished by the most competent architects and engineers whom we could employ.

WESTERN STATE HOSPITAL.

On November 1, 1914, Dr. A. P. Calhoun, superintendent of the Western State Hospital, resigned and was succeeded by Dr. W. N. Keller, the present superintendent.

No appropriation for new buildings was made for this biennium. Only \$20,000 was placed at our disposal for repairs and improvements. With this appropriation the female hydrotherapy has been completed, many wards remodeled and made light and airy, the dining room overhauled, all metal roofs of main building painted, a wagon and implement shed, a horse stable and cow barn constructed, sanitary conditions improved and various other improvements made. These will all appear in detail in the report of Superintendent Keller, which is printed in full in this volume.

In our budget we recommend what may seem a large appropriation for new buildings and further extensive improvements.

A receiving hospital is desired to complete the institution. The purpose of such a building is to afford a suitable place for the detention and observation of new patients in order that the probability of cure may be determined. The most favorable time for the cure of insanity is during the early stages and such a building as is proposed would be most admirably adapted to the work of mental treatment as well as observation. If an appropriation should be made for this purpose it is our plan to recommend that legislation be enacted permitting persons suffering from nervous diseases that might result in mental disorder to be admitted and receive treatment upon such terms and at such cost as may be prescribed. The proposed structure, when completed, would care for 400 patients and would cost \$280,000. The sum of \$168,000 requested at this time would construct only the center and two wings.

We believe the time has come when the safety of the inmates of this institution demands the erection of a detached power house and laundry building. Any casual observer must appreciate the menace of the present power house to the institution. The plan of the Board is to build a detached power house at the point on the brow of the hill just above the present pumping plant, building a new detached laundry building, and eventually ask for a sufficient appropriation to tear out the entire center of the present hospital building and construct a new modern center. All of this improvement is not necessary at this time, but we feel that a commencement should be made by removing the fire hazard now attaching to the institution. The appropriation of \$52,000 would include the removal of the boilers and machinery. The power house will include tin shop, carpenter shop, plumbing shop, machine shop and generators. also included is a brick smokestack and a steel frame coal handling plant. The laundry building will cost \$20,000, which amount will include a sterilizing washer.

EASTERN STATE HOSPITAL.

During the biennium covered by this report, the water system has been enlarged by the installation of a new pump, larger at the intake, and the construction of a new pump house; a 300 horse power boiler and automatic stoker have been installed and an improved cow and calf barn erected. Many improvements have been made, but we shall not enumerate them here, as a full description may be obtained from the superintendent's report.

An appropriation of \$30,000 was made two years ago for the purchase of what is known as the "Peat" place, an improved tract of 307 acres adjoining the institution grounds. Title to the same was taken for the state upon the approval of the same by the attorney general and the land is now a part of the hospital grounds.

The appropriations requested for repairs and improvements are quite large in the aggregate, but we believe them to be absolutely necessary in properly maintaining the institution in good order.

NORTHERN STATE HOSPITAL.

This is a new institution still in the making. It was established as a hospital farm, being a branch of the Western State Hospital, but was made a separate receiving hospital by the legislature. One hundred and eighty-eight thousand dollars were appropriated for new buildings to be erected during the term just closed and \$34,000 was given for repairs and improvements.

Two ward buildings—one to accommodate 80 men and the other 40 women—are nearing completion. A beautiful auditorium with a seating capacity of 800, is also nearly finished. The main building is already completed and in use. These buildings are of the most approved modern type, the construction being of concrete and tile.

There have also been completed a horse stable, cow barn, chicken house, and a number of smaller farm buildings.

Thirty-five acres of land were cleared and placed under cultivation.

There are still many needed improvements that call for large expenditures of money, making the budget rather large in the aggregate. We desire to direct particular attention to the larger items.

A male ward building, with a capacity of 80, and the addition of a wing to the present female ward building, to care for 40, are absolutely necessary in order that the increase in population may be received. It was found necessary during the past biennium to move the original frame buildings to the new hospital site and use them to house patients. The capacity of all buildings, including the old structures as well as those now in course of construction, is 700. The present population is 660. The increase during the next biennium is estimated at 220. No further argument would seem necessary to show how imperative this requirement is.

A tubercular cottage or ward building should be provided. Many patients afflicted with tuberculosis are committed to the hospital. They are a menace to the health and lives of other patients and should be isolated.

It is extremely difficult to find living and sleeping quarters for attendants. At present some are sleeping on wards, while others are using old shacks, tents and dark attics. An attendants' home should be built for their accommodation.

No provision has ever been made to care for the supplies of the institution. They have been stored in buildings, some of which are so dilapidated that they will hardly stand up. A commissary building is imperative.

Ten of the seventeen buildings originally planned have been built. The power plant must be enlarged to supply the growing demands. Another boiler must be provided now, which will call for an addition to the present power house. The building now in use is but a temporary affair. We recommend a permanent power house and equipment.

STATE INSTITUTION FOR FEEBLE MINDED.

Four years ago this institution was situated in close proximity to the Eastern State Hospital. An appropriation was made by the 1913 legislature for the construction of new buildings. These were erected on state land about a mile southwest of the original site, it being the judgment of the Board that the institutions should be more widely separated. As soon as the new buildings were finished the boys were removed to them and the girls remained in the old buildings. The legislature in 1915 gave us \$296,000 for additional structures to accommodate the girls, the appropriation act providing that they be erected upon "plans and location to be approved by Mr. Woodruff."

Mr. Woodruff elected to place the buildings upon the new site and we have constructed an administration building, containing also the central dining room, kitchen and superintendent's and officers' quarters; a custodial building for girls, two buildings for laundry, central heating plant and concrete smoke-

stacks. The land to what is known as the Zeigler place, containing 160 acres, for the purchase of which an appropriation of \$16,000 was made, was acquired and the lands are now a part of the institution farm.

The 250 inmates still at the old site and those on the waiting list will completely fill the buildings now nearing completion. We are, therefore, asking for an annex to each of the custodial buildings, which will accommodate a total of 120.

Up to the present time we have purchased all of the milk for the inmates to be consumed. With a large farm capable of producing a sufficient quantity of feed we should be able to sustain a dairy at profit. The dairy barn and two silos set out in our plan should be allowed, as we shall purchase some cows with which to start a herd now at our disposal.

STATE SOLDIERS' HOME.

On October 1, 1915, Dr. J. D. MacLean resigned as superintendent and E. C. Warner was appointed to succeed him.

On account of the age and character of construction of the buildings no extensive improvements could be made with the funds given us. However, a vegetable and fruit house has been built, the unsanitary hog pens torn out and temporary quarters prepared, the hospital renovated and kalsomined, and eight acres of land cleared and put under cultivation.

The buildings at this institution are of frame construction, very old, and the fire risk is extremely hazardous. A new hospital building with accommodations for 100 men should be built. The old hospital building could then be remodeled as a barracks building. A new two-story barracks building, modern and fire-proof, large enough to accommodate 120 men, should be erected to take the place of the old Pickering building. We have asked for a hospital, \$45,000; and for a new barracks building, \$40,000. Should these appropriations be made, and our requests for funds to remodel the other buildings be granted, this institution can be placed in a safe and sanitary condition.

WASHINGTON VETERANS' HOME.

No appropriation for new buildings was granted for this biennium. Twenty-one thousand dollars was set aside for repairs and improvements. Five acres of land were cleared and added to the cemetery, a new road graded, a fence around the cemetery constructed and water service inaugurated, a cement tank to store the fuel oil has been built, the kitchen remodeled by laying a tile floor and installing new equipment; the roof as well as the outside and inside of the Washington barracks has been painted and two of the eight-room cottages have been painted on the outside; a new concrete reservoir with a capacity of over 100,000 gallons was erected and a tract of one and one-half acres of land purchased to be used in connection therewith; a small annex to the hospital, in which may be confined members suffering from contagious diseases, has been built. Many other improvements of various kinds were made in the interest of efficiency.

There is a strip of land about 100 feet in width on the west side of the institution grounds, comprising 38 lots in Gaffner's

addition, which can be secured for \$6,600. The rear of the lot is only a few feet from the dining room of the institution. We recommend this appropriation very strongly, as it will give the state title to all land between the present property and the street.

The law, as amended by the last legislature, admits the presence of soldiers to this home and it becomes necessary that a building for women should be erected. We therefore request an appropriation of \$25,000 for that purpose. With this amount of money a building that will accommodate 50 to 75 women can be built.

STATE SCHOOL FOR DEAF.

No special appropriation was made for improvements. The usual funds for the upkeep of the property have been used to the best advantage.

The building now in use for school purposes is a fire trap, unsanitary, dark and a menace to the health and lives of the pupils.

We have requested an appropriation of \$35,000 for a fire-proof building and \$5,000 to equip the same.

STATE SCHOOL FOR BLIND.

On October 20, 1915, W. B. Hall, superintendent of the State School for Blind, while enjoying a few minutes of well earned recreation, was suddenly stricken and died in a few moments. He had been in charge of the school for a little over two years, during which time great improvement was made in every department of the work. His death was a serious loss to the community, the blind children and the state. Sadie E. Hall, his wife, who had worked with him for many years, was immediately made acting superintendent. So faithfully and efficiently she has continued the work that she has been appointed as permanent superintendent.

The old administration building—dark, unsanitary and unhealthful—has given way to a new, brick, fire-proof administration building, modern in every respect and adapted to the very latest methods of instruction of the blind. With funds appropriated for the next biennium we hope to wreck the old building

and improve the physical appearance of the property. After this is done no other institution of this nature will surpass our own.

The summer school for adult blind, established two years ago, has proved a great boon to those thus afflicted. Twenty-four adults have taken advantage of it and there are several who have learned trades sufficiently to enable them to become self-supporting. Minnesota is the only other state maintaining a summer school.

We are in need of more dormitory room for the growing population of this school. There is a tract of one acre on the east of the school property, having a good eight-room house and a small cottage, which can be obtained for \$5,000. Should this purchase be made the house will furnish sufficient accommodation for the next biennium, thus obviating the necessity of a new dormitory for at least two years. The state should own this land regardless of the benefit to be derived from the houses and we, therefore, urge that an appropriation of \$5,000 be made for this purpose.

We are also in need of more land on the west of the present grounds for the erection of buildings in the future. There is a tract of four and a fraction acres that can be secured for \$5,000, which we believe to be a reasonable price, and we recommend an appropriation for its purchase.

We need a kitchen building and equipment, for which \$17,000 is asked. Also a shop row for the work of the broom making and caning department and the storage of supplies for the same. Eighteen thousand dollars will be necessary for the construction of this building.

STATE PENITENTIARY.

In addition to the regular appropriations for maintenance and the operation of the jute mill, we had the usual amount of \$10,000 for repairs and improvement. The physical property has been maintained in good condition and a new brick dairy barn with a capacity of 50 cows built. Isolation cells for the detention of refractory inmates have been constructed. These

are well heated, ventilated and sanitary, furnishing a highway of punishing by solitary confinement.

A most hopeful sign is the decreasing population of this institution. In April, 1913, there were 904 inmates actually within the walls; today there are 662. From January 1, 1915, to October 1, 1915, there were 311 commitments, while during the same months in the year 1916 there were only 188. Several factors contribute to this happy result, of which the present probation law is chief. We believe, however, that the humane treatment of prisoners and the reformatory methods inaugurated during the past three years have been a most potent factor. Especially do we emphasize the "honor camp" system started by the excellency Governor Lister. During the biennium ended September 30, 1916, 255 men were sent to honor camps and only 17 escaped. Of the men who kept faith and received their final release from the camps only one has been recommitted for another crime.

Much study has been given to the addition of some new industrial system that will afford the inmates a means of earning something for their dependents and for themselves when released. Some states—notably Minnesota—have developed such a system with profit to the state and inmates. We are not in a position to report any definite plan at this time, but expect to give the matter continued investigation during the coming biennium. We have renewed the request made two years ago for a new building at this institution. The present building is unsanitary and is located within the prison walls. A new building should be erected outside of the stockade wall, thus separating the women entirely from the male prisoners. A one-story brick, fire-proof bungalow can be erected for \$10,000, and we sincerely hope that the appropriation will be made. The present roof on the cell wings is a fire menace and should be replaced with steel.

The antiquated and unsanitary bucket system should be replaced with flush toilets, and a forced ventilating system should be installed. This improvement will require increased

pumping facilities. For these purposes we are asking an appropriation of \$24,000, which request should be granted.

The recommendation for an appropriation to increase the height of the stockade wall made two years ago is hereby renewed. Four thousand dollars would increase the wall from its present height of 14 feet to 22 feet or 23 feet. This would pay for itself in a few years, as it would do away with one guard and make the lives of the other officers safer.

STATE TRAINING SCHOOL.

On December 31, 1915, G. A. Russell resigned as superintendent and was succeeded by Rev. H. H. Mitchell. Rev. Mitchell retired June 1, 1916, and Rev. George A. Sheafe, formerly chaplain of the State Penitentiary, was appointed as his successor.

During the year a fine, new, concrete storeroom was erected almost wholly by the labor of the boys. It is a great improvement, as we are now able to keep the stores in one place where formerly they were scattered among different places.

The interior of the squad building has been painted, sanitary closets installed and the appearance of the buildings much improved. These buildings, however, are not adapted to the work for which they were intended. The success of the State School for Girls has convinced us that the cottage system should be adopted and a start made in the erection of adequate buildings. We are asking for two cottages, each to accommodate 48 boys, at a cost of \$100,000.

We have also requested an appropriation of \$20,000 for a gymnasium. At the present time the only places provided for recreation at night and during the dark and stormy weather are the basements of the old buildings. A modern gymnasium is an essential requirement.

STATE SCHOOL FOR GIRLS.

On November 1, 1916, Miss Mary Campbell was appointed superintendent of the State School for Girls, a new institution created by act of the legislature of 1913. The success of this

l has fully justified the wisdom of the legislature in creating it. We direct especial attention to the report of the superintendent printed in full herein and containing very comprehensive information regarding the methods and results accomplished.

During the past biennium a new pressed brick administrative building has been completed. There is also accommodation for 24 girls in the building.

New land has been cleared and is now under cultivation, a dairy herd started, pigs, chickens and other livestock raised. The girls have proved to be good farmers and the boys of other institutions will have hard work to excel them. We are asking for an appropriation of \$45,000 for a cottage containing 30 single rooms for girls, together with officers' quarters, etc. The construction of this building is made necessary by the rapid growth of the number of commitments. At present time all buildings are completely full, containing more than the number provided by law for each building, and if other girls are to be received a new building must be added.

This is called a State School for Girls, yet no school rooms have been provided. Last year the girls were crowded into the geologic science room. The population has increased until now it is impossible to care for them in this manner. We are therefore requesting \$85,000 to build a school building of eight rooms with auditorium and gymnasium.

RECOMMENDATIONS FOR LEGISLATION.

We recommend that the salaries of the superintendents of the State Penitentiary and the State Institution for Feeble-minded be increased to \$3,000 per annum, and that the salary of the superintendent of the State Soldiers' Home be increased to \$3,000 per annum. The present salary of the superintendent of the State Penitentiary is only \$1,200 per annum, while that of the superintendent of the State Reformatory, a much larger institution, is \$3,000 per annum. We believe that the salary of the superintendent of the penitentiary should be equal

to that of the superintendent of the reformatory. The present salary of the superintendent of the Institution for Feeble Minded is \$1,200 per annum, which is ridiculously low. In our opinion, \$3,000 per annum would be a proper salary for this position. The present salary of the superintendent of the State Soldiers' Home is \$1,300 per annum, while that of the superintendent of the Washington Veterans' Home is \$1,800 per annum. We are asking for this increase in order that the salaries of the two superintendents may be equal.

2. The applications for admission to our Soldiers' Homes and Soldiers' Home Colony have become so numerous that it is impossible for our homes to care for all of the applicants. The law provides that the applicant must have resided within the state at least three years prior to the time of making application. We know that a great many have applied for membership who have lived in the state only the requisite time, which leads us to believe that some of them come here for the sole purpose of gaining a residence and securing membership in our homes. We believe it would be wise to extend the time of residence to five years and recommend that such legislation be enacted.

We believe that further restriction should be made in prescribing eligibility of applicants for admission to our homes by providing that no persons shall be eligible except those who enlisted from the State of Washington. An exception should be made of veterans of the Civil War, but this restriction should apply to those of all other wars. The reason for this is apparent. Of those already admitted to our homes a comparatively small proportion were sent from our own state. If we continue to receive those who should be maintained by other states it will surely result in our inability to care for our own residents. We, therefore, recommend that legislation along this line be enacted.

3. In our budget we are asking for an appropriation to build a psychopathic ward at the Western State Hospital at Fort Steilacoom. Should this appropriation be granted, a law

and be enacted which will permit persons to voluntarily place themselves in the care of the hospital when they may be suffering from nervous diseases or threatening mental disorder, in that they may receive treatment which may ward off a mental break-down, under such rules and at such cost as may be prescribed by the State Board of Control.

There are in our hospitals a great many non-resident patients. A number of states have entered into reciprocal agreements, by which patients who properly belong in another state may be returned at the expense of the state making the arrangement. We believe that the State of Washington would benefit from such an agreement. We, therefore, recommend that legislation be enacted authorizing this Board to enter into an agreement with any other state, by which it may give its consent for the return of any residents of this state confined in other state hospitals, provided such states will reciprocate by returning their own residents who are inmates of our institutions. It should also be made a felony for any person to bring an insane person into the state without first having obtained the consent of the State Board of Control.

In 1907 an act was passed establishing the criminal insane ward at the State Penitentiary for the confinement of prisoners acquitted of crime by reason of insanity. Under an appropriation made by the same legislature, a building adapted for such use was built at the Eastern State Hospital at Medical Center.

It has been the policy of this Board to immediately transfer criminal insane to the Eastern State Hospital, where they may be safely confined and properly treated for their mental derangement. The criminal insane ward at the State Penitentiary should be abolished and one established at the Medical institution.

Under the present law, the secretary of state, state auditor and state treasurer constitute the public property commission, which alone, by and with the advice and consent of the governor, has authority to sell any personal property belong-

ing to the state for which there is no further use, the moneys realized from such sale being turned in to the state treasurer. The Board of Control has charge of the State Capitol building and Temple of Justice, as well as the twelve charitable, penal and reformatory institutions. We believe it would be wise to vest in this Board the power to make sales of personal property belonging to the institutions and buildings under its control. We also recommend that power be given to exchange articles for others of equal value whenever, in the judgment of the Board, such action would be for the best interests of the state. We very frequently have an opportunity to exchange products of our farm and livestock departments, which are not needed by the institutions, for other articles required. In many cases the exchange is more profitable than a sale for cash. For this reason we are asking for legislation which will permit us to use our discretion, under proper supervision, in the matter of selling or exchanging personal property.

7. For a number of years there has been accumulating at the various institutions moneys in what is known as the deceased inmates' fund. Some steps should be taken to escheat these funds to the state where the inmate has been dead for more than seven years and no heirs have made claim to the estate. Under the present law the only method by which the property can be escheated is through the regular course of probate procedure. As the amounts are usually small, they would be entirely consumed by court costs. We recommend that a law be passed by which these funds will automatically escheat without proceedings in probate.

8. The lives of many officers, employes and inmates in our state institutions have in many cases been jeopardized by persons hunting upon the institution grounds. There should be a law prohibiting any person from hunting upon these grounds.

9. We recommend a law making it a penalty for any person to assist an inmate of a state institution to escape from such institution.

9. During the session of the State Bar Association, held jointly with the Oregon Bar Association at Portland in 1915, the Board met with the prosecuting attorneys and superior judges who were present, for the purpose of discussing inequalities arising from the administration of our present indeterminate sentence law. It was the consensus of opinion of the Board present that the law should fix the maximum and minimum terms in each class of cases, leaving the state prison board and the board of directors of the State Reformatory to say when a man should be released from these respective institutions. A committee, consisting of Hon. John R. Mitchell, judge of the superior court for Thurston county; Hon. Kenneth Mackintosh, judge of the superior court of King county; Hon. Edward H. Wright, judge of the superior court of Pacific county; Hon. Scott Z. Henderson, assistant attorney general, and Hon. Frank P. Christensen, prosecuting attorney of San Juan county, was appointed to work in conjunction with the Board of Control in the matter of recommending such legislation as would bring about a greater uniformity in prison and reformatory sentences. All members of this committee, with the exception of Judge Mitchell, met in the city of Olympia, and after adopting resolutions favoring the enactment of such a law, appointed Hon. Scott Z. Henderson and Hon. T. E. Skaggs to prepare a bill and submit the same to the legislature. We add our recommendation to that of the judges and urge the passage of this

10. During the last session of the legislature, an adult probation law was drafted by the superior judges of the superior court of King county and introduced in the state senate by Senator John E. Campbell of Snohomish county. The bill failed of passage. We understand that a similar bill will be introduced at the coming session of the legislature and we desire to place on record as favoring the passage of the same.

11. A number of states have created the office of public defender, and such an officer has proved to be a valuable factor in securing justice for men accused of crime who have neither

sufficient funds nor friends to enable them to secure a proper defense and, therefore, plead guilty in the hope of securing a light sentence for so doing. We have been informed that a bill will be presented to the legislature creating a public defender in the different counties of this state. Should such a bill be introduced it will receive our unqualified endorsement.

18. The law provides that a person released from the Penitentiary shall receive a suit of clothes, five dollars in cash and transportation to the county from which he was committed. This act was passed before we had a system of parole and has been construed as applying only to those leaving with a final release. We do not believe it to be fair to employers, who are willing to help discharged men to the extent of furnishing them work, to require them to furnish transportation money in advance. We, therefore, recommend a law providing for the payment of five dollars and the furnishing of transportation to place of employment to all men released from the penal institutions, regardless of the manner of release.

We desire to express our appreciation of the support and assistance given us by his excellency Governor Lister, without which the splendid results of the present biennium could not have been achieved.

We are also appreciative of the courtesy and co-operation on the part of the superintendents of the various institutions.

We have received invaluable assistance from the state highway department, the department of agriculture, the public service commission and the state labor commissioner, and we take this opportunity of making public acknowledgment of the same.

STATE BOARD OF CONTROL.

LIST OF MEMBERS AND EMPLOYEES, SHOWING ANNUAL SALARIES.

	Position	Salary Per Annum
Morse.....	Chairman	\$3,000 00
Taggs	Member	3,000 00
Cochran.....	Member	3,000 00
Borgerson.....	Secretary ..	2,000 00
Johnson.....	Auditor	1,500 00
Watson.....	Stenographer	1,200 00
S. Cameron.....	Stenographer	900 00
Webster.....	Dentist	1,800 00
Abb.....	Traveling Attendant, Western State Hospital..	720 00
Thompson.....	Traveling Attendant, Western State Hospital....	720 00
McKee.....	Assistant Traveling Attendant, Western State Hospital....	680 00
Angler	Traveling Attendant, Eastern State Hospital....	720 00
Booke.....	Traveling Attendant, Eastern State Hospital....	720 00
Breth	Traveling Attendant, Eastern State Hospital....	600 00
Dee	Traveling Attendant, Northern State Hospital....	720 00
Don	Traveling Attendant, Northern State Hospital....	720 00
Crosno	Traveling Guard, State Penitentiary	1,500 00
Borton.....	Traveling Guard, State Penitentiary	1,500 00
Truman.....	Parole Officer, State Penitentiary	1,500 00
Hille.....	Parole Officer, State Training School.....	1,500 00
Abb.....	Parole Officer, State Reformatory	1,500 00
Crell.....	Parole Officer, State Reformatory	1,200 00
Tham.....	Traveling Guard, State Reformatory	1,500 00

OFFICERS AND EMPLOYEES OF THE INSTITUTIONS UNDER THE SUPER-
VISION OF THE STATE BOARD OF CONTROL AND SALARIES PAID, AS PER
SCHEDULE ADOPTED APRIL 1, 1916.

WESTERN STATE HOSPITAL.

	Position	Salary Per Annum
Her.....	Superintendent	\$4,000 00
Witt.	First Assistant Physician....	2,500 00
ewart.....	Second Assistant Physician...	2,000 00
ose Gulick.....	Third Assistant Physician....	1,800 00
berland.....	Accountant	1,200 00
anson	Clerk	840 00

<i>Name</i>	<i>Position</i>	<i>Salary Per Annum</i>
J. T. Petrich.....	Stenographer	600 00
Essie Cole	Office Girl	300 00
Geo. W. Thompson.....	Steward and Storekeeper.....	1,800 00
Frederick Miles	Druggist	600 00
R. T. Russell.....	Supervisor	1,020 00
E. E. Macklin.....	Assistant Supervisor	780 00
Iva Osborn	Matron	900 00
A. McLean	Chief Engineer	1,500 00
M. McCully	First Assistant Engineer.....	900 00
J. G. Paquette.....	Second Assistant Engineer.....	720 00
E. Nelson	Fireman	600 00
Joe Kalin	Fireman	600 00
Joe Siddall	Fireman	600 00
Walter Hatcher	Cook	1,020 00
Geo. Rigney	First Assistant Cook.....	720 00
Chas. Runquist	Second Assistant Cook.....	600 00
Henry Larsen	Third Assistant Cook.....	600 00
C. B. Lund.....	Cook's Helper	300 00
Geo. Harrison	Baker	900 00
Curt P. Rath.....	Assistant Baker	540 00
Sam Wier	Carpenter	900 00
W. S. Isenberg.....	Painter and Paperhanger.....	780 00
S. H. Patterson.....	Tinsmith and Machinist.....	720 00
H. L. Ingram.....	Plumber	1,080 00
C. H. Dexter.....	Mason	1,080 00
Fred Pridmore	Laundryman	780 00
Nellie Pridmore	Laundress	540 00
Edna Ammann	Assistant Laundress	420 00
Lily Christiansen	Assistant Laundress	420 00
Alf. Jacobson	Florist	900 00
John Leska	Gardener	900 00
V. W. Richards.....	Manager of Livestock.....	1,200 00
A. N. Davison.....	Asst. Mgr. of Livestock.....	720 00
C. E. Weeks.....	Teamster	540 00
T. P. McNamara.....	Janitor	480 00
Lulu Settle	Hydro. Attendant	600 00
Edith Kirkwood	Night Watch	600 00
Lucy Hunt	Night Watch	600 00
Clara Wier	Night Watch	600 00
Belle Quinn	Charge Attendant	600 00
Louise Kirtley	Charge Attendant	600 00
Clara Sawyer	Charge Attendant	540 00
Anna Macklin	Charge Attendant	540 00
Lottie Black	Charge Attendant	540 00
Lida Hubbard	Charge Attendant	540 00
Bessie Sutherland	Charge Attendant	540 00
Celia Cornell	Charge Attendant	540 00
Laura Peterson	Charge Attendant	540 00
Ada MacKay	Charge Attendant	540 00
Helen Polson	Charge Attendant	540 00
Clara Boyer	Charge Attendant	540 00
O. T. Tupps.....	Charge Attendant	540 00
Blanche Maherrey	Attendant	480 00
Edith de Carteret.....	Attendant	480 00
Jessie Laidlow	Attendant	480 00
Edna Hansen	Attendant	480 00

	Position	Salary Per Annum
Stuart	Attendant	480 00
Sodkie	Attendant	480 00
Stewart	Attendant	480 00
Golden	Attendant	480 00
Foster	Attendant	480 00
Crouse	Attendant	480 00
Montgomery	Attendant	480 00
Laidlaw	Relief Attendant	480 00
Nyder	Relief Attendant	420 00
Nick	Relief Attendant	420 00
Bleeter	Relief Attendant	420 00
Cook	Relief Attendant	390 00
Colster	Relief Attendant	360 00
arks	Relief Attendant	360 00
Blin	Surgical Nurse	600 00
se	Attendant	540 00
Irwin	Attendant	540 00
choltens	Attendant	480 00
athis	Attendant	480 00
rke	Attendant	480 00
hen	Attendant	480 00
patrick	Night Watch	600 00
asmussen	Night Watch	600 00
Kirkwood	Night Watch	600 00
dkie	Hydro. Attendant	600 00
od	Spec. Attendant	540 00
orse	Attendant	600 00
rwins	Attendant	600 00
athis	Attendant	540 00
oltens	Attendant	540 00
ldwin	Attendant	540 00
ack	Attendant	540 00
nan	Attendant	540 00
urke	Attendant	540 00
ughes	Attendant	540 00
ackard	Attendant	540 00
McCallister	Attendant	540 00
ame	Attendant	540 00
ubbard	Attendant	540 00
yot	Attendant	540 00
ewart	Attendant	540 00
alnn	Attendant	540 00
ole	Attendant	480 00
ristensen	Attendant	480 00
earer	Attendant	480 00
ker	Attendant	480 00
Parks	Attendant	420 00
arvey	Attendant	480 00
iden	Attendant	480 00
ish	Attendant	480 00
earpe	Attendant	480 00
ook	Attendant	480 00
eeeter	Attendant	480 00
e	Attendant	540 00
tis	Attendant	480 00
d	Attendant	420 00

<i>Name</i>	<i>Position</i>	<i>Salary Per Annum</i>
J. C. Stranahan	Attendant	480 00
J. S. Ward	Attendant	480 00
W. W. Cole	Attendant	480 00
O. D. Bolster	Attendant	480 00
E. J. Etique	Attendant	480 00
W. Speaks	Attendant	480 00
Sadie Murphy	Waitress	330 00
Edith Kelley	Waitress	330 00
Frances Niels	Waitress	330 00
Bessie Kirkpatrick	Housekeeper	480 00
Emma Russell	Industrial Teacher	720 00

EASTERN STATE HOSPITAL

<i>Name</i>	<i>Position</i>	<i>Salary Per Annum</i>
A. S. Oliver, Jr.	Superintendent	\$ 4,000 00
M. W. Conway	Assistant Physician	2,500 00
J. C. Boyle	Assistant Physician	2,000 00
D. G. Wakefield	Steward and Acct.	1,200 00
Earl Goetchius	Stenographer	720 00
Geo. K. Renkert	Storekeeper	840 00
J. W. Fishback	Supervisor	1,080 00
Katherine Dean	Matron	900 00
Theo. Scholer	Engineer	1,500 00
W. S. Fleet	Assistant Engineer	900 00
Jas. S. Gruber	Assistant Engineer	780 00
Jack Hayre	Fireman	660 00
T. W. Pedigo	Cook	1,020 00
David Spears	Assistant Cook	660 00
Arthur Scott	Assistant Cook	600 00
Olive Peterson	Farm Cook	540 00
Geo. Knutson	Baker	780 00
Sam Lemay	Laundryman	780 00
C. J. Opers	Assistant Laundryman	600 00
Emily Brown	Laundress	540 00
Nellie Gray	Assistant Laundress	420 00
P. S. Irvine	Carpenter	1,020 00
G. B. Webster	Gardener	780 00
Theodore Podleck	Assistant Gardener	540 00
Fred Uily	Assistant Gardener	480 00
W. F. Hill	Florist	720 00
J. W. McDonald	Farmer	960 00
Peter Peterson	Assistant Farmer	600 00
Albert Luders	Assistant Farmer	600 00
Nels Olson	Dairyman	720 00
S. W. Johnson	Stockman	840 00
F. L. Lewis	Teamster	540 00
Robert Lewis	Poultryman	720 00
A. R. Hall	Janitor	600 00
C. O. Vaughn	Mason	900 00
Etta Chambers	Seamstress	540 00
Jennie Chamberlain	Waitress	330 00
Mae Peffey	Waitress	330 00
S. A. Long	Chaplain	300 00
Emma Proehl	Attendant	600 00
Ansel Babbe	Attendant	600 00

Name	Position	Salary Per Annum
Pendergast	Attendant	800 00
Hille	Attendant	800 00
Anderson	Attendant	800 00
Smith	Attendant	800 00
Eppler	Attendant	800 00
Doxurk	Attendant	800 00
urdock	Attendant	800 00
Brogan	Attendant	800 00
Johnson	Attendant	800 00
Sinks	Attendant	800 00
Kenna	Attendant	540 00
Davis	Attendant	540 00
Wilson	Attendant	540 00
Hanson	Attendant	540 00
Killion	Attendant	540 00
Tyrer	Attendant	540 00
Hughes	Attendant	540 00
Baker	Attendant	540 00
Staley	Attendant	540 00
Atchley	Attendant	540 00
Stroud	Attendant	540 00
Gregory	Attendant	540 00
Van Akin	Attendant	540 00
Costard	Attendant	540 00
de Bangle	Attendant	540 00
Harding	Attendant	540 00
Hayes	Attendant	540 00
Kinnaman	Attendant	540 00
Hickerson	Attendant	540 00
Backen	Attendant	540 00
Roberts	Attendant	540 00
Pollom	Attendant	540 00
Sellix	Attendant	540 00
Angel	Attendant	480 00
Bunde	Attendant	480 00
Lauderdale	Attendant	540 00
McGinley	Attendant	480 00
Clemens	Attendant	480 00
Mead	Attendant	480 00
Moore	Attendant	480 00
Frederickson	Attendant	540 00
Pitts	Attendant	480 00
Ball	Attendant	540 00
Angel	Attendant	480 00
Conley	Attendant	480 00
Shea	Attendant	480 00
McCann	Attendant	480 00
Peterson	Attendant	480 00
Moorman	Attendant	480 00
Messinger	Attendant	480 00
Gentry	Attendant	480 00
Conney	Attendant	480 00
Havel	Attendant	480 00
Fishback	Attendant	480 00
Tollison	Attendant	480 00
Haller	Attendant	480 00

<i>Name</i>	<i>Position</i>	<i>Salary Per Annum</i>
Walter Fleet	Attendant	360 00
S. Martin	Attendant	480 00
Edward P. Thilgin	Attendant	480 00
W. F. Hiner	Attendant	480 00
Edward Luders	Attendant	360 00
Joe Rasmussen	Attendant	360 00

NORTHERN STATE HOSPITAL.

<i>Name</i>	<i>Position</i>	<i>Salary Per Annum</i>
J. W. Doughty	Superintendent	\$4,000 00
H. D. Miller	Assistant Superintendent	2,000 00
Joseph Hehir	Physician	1,500 00
F. A. Crane	Accountant	1,200 00
Carrie Munro	Stenographer	480 00
Kate Keane	Matron	780 00
H. F. Higley	Supervisor	900 00
Fred G. A. White	Engineer	1,500 00
Geo. W. Towalee	First Assistant Engineer	900 00
H. B. Walker	Second Assistant Engineer	720 00
D. C. Hunter	Fireman	600 00
C. E. Nicholson	Fireman	600 00
J. J. Corrigan	Farmer	900 00
John Fraser	Assistant Farmer	480 00
Peter Pyfe	Teamster	540 00
Ward Bruce	Teamster	540 00
E. Gillis	Carpenter	900 00
H. Regnander	Painter	720 00
P. W. Major	Powderman	1,200 00
M. Koch	Cook	900 00
J. M. Heagerty	Assistant Cook	720 00
Steve Wilkerson	Assistant Cook	600 00
C. A. Newman	Cook's Helper	360 00
Robt. Taylor	Baker	900 00
F. G. Purington	Laundryman	780 00
Eva Higley	Laundress	540 00
Bella Stewart	Laundress	360 00
Mrs. B. F. Healey	Night Watch	600 00
B. F. Healey	Night Watch	600 00
Kate Pritchett	Night Watch	600 00
J. Whitaker	Night Watch	600 00
O. A. Gregorson	Night Watch	600 00
E. B. Webb	Night Watch	600 00
M. J. Collins	Night Watch	600 00
Alice Laidlaw	Attendant	540 00
Rosa Bell	Attendant	480 00
Clara Burton	Attendant	540 00
Josie Roby	Attendant	480 00
Mary O'Donnell	Attendant	600 00
Anna Anderson	Attendant	540 00
Alice Johnson	Attendant	480 00
May Walker	Attendant	480 00
M. Reed	Attendant	480 00
John Keane	Attendant	540 00
Inga Qually	Attendant	600 00
Bert Ewing	Attendant	480 00

	Position	Salary Per Annum
Aegerter	Attendant	540 00
Alson	Attendant	480 00
Alain	Attendant	600 00
Alson	Attendant	540 00
Arton	Attendant	540 00
Seaman	Attendant	480 00
Smith	Attendant	540 00
Berganer	Attendant	480 00
Stewart	Attendant	480 00
Burgess	Attendant	540 00
Ayers	Attendant	480 00
Witt	Attendant	480 00
ell	Attendant	480 00
Roby	Attendant	600 00
awson	Attendant	540 00
tenecke	Attendant	480 00
erle	Attendant	480 00
arodias	Attendant	480 00
Wright	Attendant	480 00
Clark	Attendant	480 00
me	Attendant	480 00
errill	Attendant	600 00
Impeon	Attendant	480 00
Stanell	Waitress	360 00
anaheld	Waitress	360 00

INSTITUTION FOR FEEBLE MINDED.

	Position	Salary Per Annum
Woodruff	Superintendent	\$1,200 00
K. Woodruff	Matron	1,200 00
owiby	Physician	900 00
owiby	Assistant Matron	720 00
Walsh	Accountant	960 00
Smith	Clerk	600 00
Truitt	Engineer	980 00
Graten	Assistant Engineer	720 00
Borlin	Asst. Eng. and Laundryman	840 00
nke	Assistant Engineer	720 00
ve (Inmate)	Fireman	30 00
sperson (Inmate)	Fireman	30 00
oach	Cook	780 00
Archibald	Cook	900 00
illz	Baker and Asst. Cook	780 00
e McConkle	Baker and Asst. Cook	780 00
Dennison	Farmer	720 00
Myers	Assistant Farmer	360 00
agner	Assistant Farmer	480 00
lbbeta	Teamster	480 00
Farindal	Laundress	720 00
Smith	Maid and Asst. Laundress	420 00
Gigler	Maid	420 00
mer	Supervisor	720 00
Jacobs	Supervisor	720 00
ellerman	Night Watch	540 00
Seed	Night Watch	540 00
uffe	Night Watch	540 00

<i>Name</i>	<i>Position</i>	<i>Salary Per Annum</i>
Clara Signor	Relief and Seamstress.....	480 00
Adelaide K. Hamilton.....	Teacher	600 00
Jane Horton	Teacher	600 00
Margaret Smith	Teacher	600 00
Louise Fowler	Teacher	600 00
Anna F. Webb.....	Teacher	600 00
Ora Tuttle	Teacher	600 00
Inez Adams	Teacher	600 00
E. Mabel McBride.....	Attendant	540 00
Alice Walsh	Attendant	540 00
Lizzie King	Attendant	540 00
Mildred Walker	Attendant	540 00
Genevieve Brown	Attendant	540 00
C. A. Dunphy.....	Attendant	540 00
Jennie Baker	Attendant	540 00
Annie Murdock	Attendant	540 00
Elizabeth Burke	Attendant	420 00
Ella Reid	Attendant	540 00
Anna Anderson	Attendant	540 00
Ruth Baker	Attendant	540 00
Elsie Fluke	Attendant	540 00
Mrs. U. V. Weaver.....	Attendant	540 00
A. M. Jacobs.....	Attendant	540 00
A. E. Winterstein.....	Attendant	540 00
E. J. Gilkey.....	Attendant	540 00
Ella Gilkey	Attendant	540 00
M. E. Willis.....	Attendant	540 00
Mrs. M. E. Willis.....	Attendant	540 00
F. M. Hunter.....	Attendant	540 00
B. T. Hunter.....	Attendant	540 00
J. A. Palmer.....	Attendant	540 00
Chas. W. Kitchner.....	Attendant	540 00
D. R. Perry.....	Attendant	540 00
Beatrice Perry	Attendant	540 00
Sue Krebs	Attendant	540 00
Gust Mattson	Attendant	540 00
S. M. Burke.....	Attendant	540 00
Nell Smith	Attendant	540 00

STATE SOLDIERS' HOME.

<i>Name</i>	<i>Position</i>	<i>Salary Per Annum</i>
Ed. C. Warner.....	Superintendent	\$1,250 00
Martin L. Bibb.....	Adjutant	1,200 00
D. A. Gove.....	Physician	840 00
Dora R. Hughes.....	Stenographer	600 00
A. Clarke	Commissary Sergeant	420 00
James M. Ewing.....	Day Officer	180 00
Mrs. Alice B. Warner.....	Matron	360 00
Lotta I. Records.....	Housekeeper	330 00
T. S. Robbins.....	Captain and Steward.....	300 00
J. B. Shaw.....	Captain	120 00
C. D. Jones.....	Captain	120 00
Charles Pettis	Captain	120 00
J. N. Bertram.....	Captain	120 00
F. M. Corbell.....	Captain	120 00

	Position	Salary Per Annum
.....	Nurse	240 00
Harrington	Nurse ..	240 00
Garkey	Nurse	240 00
Agell	Nurse	240 00
Kent	Nurse	240 00
Alkire	Fatigue Sergeant	180 00
Summers	Engineer	1,200 00
Maitland	Fireman	600 00
.....	Fireman	600 00
Boeckh	Fireman ..	600 00
Ingersoll	Shoemaker	180 00
Barrett	Florist	180 00
McRae	Cook	600 00
.....	Cook ..	600 00
.....	Assistant Cook	240 00
.....	Assistant Cook	240 00
Matthews	Baker	600 00
Cronmiller	Assistant Baker	240 00
Alvord	Steward	360 00
.....	Dishwasher	180 00
.....	Dishwasher	240 00
.....	Dishwasher ..	180 00
.....	Dishwasher	180 00
F. Horner	Scrubber	180 00
.....	Waiter	240 00
.....	Waiter	240 00
.....	Waiter ..	240 00
Dalton	Waiter ..	240 00
Vickersham	Waitress	240 00
Hamil	Waitress	240 00
Nelson	Waitress ..	240 00
.....	Laundress	360 00
Crow	Assistant Laundress ...	240 00
W. Polson	Laundryman ..	300 00
Britto	Assistant Laundryman	240 00
Maitland	Farmer	480 00
McNeill	Dairyman	480 00
.....	Assistant Dairyman ...	120 00
.....	Teamster	240 00
.....	Night Watch	180 00
.....	Laborer	120 00
.....	Laborer	240 00

WASHINGTON VETERANS' HOME.

	Position	Salary Per Annum
Viscombe	Superintendent	\$1 800 00
Viscombe	Matron	780 00
McCallum	Adjutant ..	1,380 00
Shively	Stenographer ..	600 00
Dowell	Engineer	1,500 00
.....	Fireman	420 00
.....	Fireman	480 00
Mans.	Fireman ..	420 00
Johnson	Physician	1,440 00
.....	Nurse	720 00
Montanye ..	Nurse	720 00

<i>Name</i>	<i>Position</i>	<i>Salary Per Annum</i>
E. Cookson	Nurse	240 00
S. J. Donnelly.....	Nurse	300 00
Geo. A. Haggerty.....	Nurse	300 00
John Richardson	Nurse	300 00
C. J. Bjarlo.....	Nurse	300 00
Carlton H. Finley.....	Nurse	300 00
C. W. Cook.....	Cook	1,020 00
Charles Hilt	Cook	1,020 00
Hannah Hilt	Assistant Cook	300 00
Eva Cook	Assistant Cook	180 00
Paul Evers	Baker	900 00
John Walling	Assistant Baker	300 00
Nellie Burns	Waitress	300 00
Mabel Phelps	Waitress	300 00
Columbia Hoffman	Waitress	240 00
Mary Tessler	Waitress	240 00
Minnie Dalrymple	Waitress in Diet Kitchen.....	240 00
Marion Hirst	Waitress	240 00
Ida Wilson	Waitress	240 00
Eva Wilmarth	Waitress	240 00
Hattie Scribner	Waitress	240 00
Julia Hamilton	Waitress	240 00
Birdie Wilders	Waitress	240 00
C. J. Davis.....	Stewardess	360 00
Henry Eaton	Dishwasher	300 00
H. Phelps	Dishwasher	240 00
Fred Matteson	Potwasher	240 00
C. C. Penders.....	Potwasher	240 00
C. W. McKinzie.....	Vegetable Cleaner	120 00
Alvina Murker	Housekeeper	360 00
M. D. Smith.....	Commissary Sergeant	420 00
Thomas H. Rutter.....	Barrack Captain	180 00
W. L. Fleming.....	Barrack Captain	180 00
John Brown	Watchman	300 00
Harry Foster	Janitor	300 00
Emma Lewis	Janitress	240 00
J. H. Minor.....	Teamster	300 00
James Dunn	Laundryman	300 00
Oliver Rake	Laundryman	240 00
Mary Willard	Laundress	300 00
Mary Edwards	Laundress	240 00
Belle Murphy	Laundress	240 00
George White	Wharfinger	240 00

STATE SCHOOL FOR DEAF.

<i>Name</i>	<i>Position</i>	<i>Salary Per Annum</i>
Thomas P. Clarke.....	Superintendent	\$1,800 00
Mary B. Clarke.....	Matron	1,080 00
Dr. M. U. Leiser.....	Physician	180 00
John A. Fraser.....	Steward	900 00
L. A. Divine.....	Teacher	1,500 00
Geo. B. Lloyd.....	Teacher	1,500 00
Wm. S. Hunter.....	Teacher	1,080 00
Mary E. Kilgore.....	Teacher	780 00
Sara McBride	Teacher	840 00
Frieda Meagher	Teacher	780 00

	<i>Position</i>	<i>Salary Per Annum</i>
L. Fraser.....	Teacher	780 00
Otis.....	Teacher	840 00
oylan	Teacher	720 00
Skoglund.	Teacher	720 00
ick Meagher . . .	Instructor in Printing.	660 00
Moore.....	Instructor in Leather Work. .	780 00
Caton.....	Instructor in Cooking.....	600 00
McDonald.....	Instructor in Carpentry.....	660 00
des	Instructor in Sewing.....	600 00
mick	Nurse	480 00
Perrine	Supervisor	360 00
Donald	Supervisor	360 00
ton	Supervisor	880 00
peed	Cook	840 00
ola	Assistant Cook	480 00
Weston	Cook's Helper	300 00
Hebauer	Waitress	360 00
tcalf	Maid	360 00
mith	Maid	300 00
le	Maid	300 00
Baty	Laundryman	720 00
Johnson	Laundress	360 00
Little	Janitor	240 00
all	Engineer	900 00
mpson.....	Fireman	600 00
oe	Night Watch	600 00
angdon	Night Watch	360 00
A. Kiper.....	Farmer	600 00

STATE SCHOOL FOR BLIND.

	<i>Position</i>	<i>Salary Per Annum</i>
Hall.....	Superintendent	\$1,800 00
Harris.....	Matron	720 00
Knight.....	Accountant	900 00
Lieser	Physician	180 00
ire	Engineer	720 00
on	Literary Teacher	780 00
Nixon	Literary Teacher	780 00
Tate	Literary Teacher	780 00
M. Hall.....	Assistant Literary Teacher ..	420 00
Richardson.....	Music Teacher	780 00
rey	Music Teacher	780 00
Ranning	Assistant Music Teacher.....	240 00
ming.....	Industrial Teacher	660 00
ikjer	Cook	600 00
olkjer	Assistant Cook	360 00
ughes	Janitor	480 00
ickey	Boys' Supervisor	480 00
ipp	Girls' Supervisor	540 00
nger	Maid	360 00
n	Maid	360 00
th	Maid	360 00
neely	Maid	300 00
Langdon	Watchman	480 00
ine	Laundress	300 00
Baty	Laundress	300 00

STATE PENITENTIARY.

<i>Name</i>	<i>Position</i>	<i>Salary Per Annum</i>
Henry Drum	Superintendent	\$1,800 00
Henry Drum	Chairman State Prison Board.	1,200 00
C. A. Ledgerwood.....	Assistant Superintendent.....	1,620 00
C. F. H. Vollendorff.....	State Clerk	900 00
F. H. Butcher.....	Superintendent's Clerk.....	1,380 00
F. H. Butcher.....	Teacher Night School.....	300 00
Dwight Burton	Stenographer	840 00
D. E. Nickelson.....	Bertillon and Record Clerk..	1,380 00
S. C. Masterson.....	Quartermaster	900 00
W. H. Ludwig.....	Steward	960 00
B. L. Jones.....	Physician	1,800 00
Roy M. Anderson.....	Engineer	600 00
Anna Bouldron	Matron	780 00
A. P. Orr.....	Usher	840 00
Thos. Wilkinson	Farmer	1,020 00
Jas. Waddell	Mgr. Livestock and Meats....	900 00
J. T. Burke.....	Chief Turnkey	1,500 00
Arthur Anderson	Chief Night Turnkey.....	1,080 00
I. E. Severson.....	Day Turnkey	780 00
W. H. Dixon.....	Day Turnkey	780 00
E. A. Connick.....	Day Turnkey	780 00
R. A. Grant.....	Day Turnkey	780 00
Thos. Prescott	Night Turnkey	780 00
Seth Chandler	Night Turnkey	780 00
J. W. Stewart.....	Night Turnkey	780 00
J. L. James.....	Gatekeeper	780 00
C. E. Kennedy.....	Gatekeeper	720 00
Antone Gamma	Warehouseman	240 00
F. A. Davis.....	Guard	720 00
E. P. Gregory.....	Guard	720 00
Emil Sparks	Guard	720 00
A. L. Delaney.....	Guard	720 00
L. H. Bush.....	Guard	720 00
Walter S. Barnes.....	Guard	720 00
E. E. Birdwell.....	Guard	720 00
Grover G. Guler.....	Guard	720 00
H. R. Tate.....	Guard	720 00
S. D. McCauley.....	Superintendent Jute Mill.....	1,500 00
J. S. Reid.....	Asst. Supt. Jute Mill.....	900 00
Roy M. Anderson.....	Engineer	1,020 00
C. F. H. Vollendorff.....	State Clerk	900 00
W. H. Meads.....	Overseer	780 00
Earl McInroe	Overseer	780 00
J. B. Kelly.....	Cage Guard	840 00
H. L. Briggs.....	Watchman	720 00
Wm. O'Neill	Guard	720 00
B. S. Bishop.....	Guard	720 00
L. Doneen	Guard	720 00
F. E. France.....	Guard	720 00
J. W. Taylor.....	Guard	720 00
Rev. T. J. Cannon.....	Chaplain	1,200 00

STATE TRAINING SCHOOL.

<i>Name</i>	<i>Position</i>	<i>Salary Per Annum</i>
Sheafe.....	Superintendent	\$1,800 00
H. Sheafe.....	Housekeeper	600 00
Chase.....	Assistant Superintendent	900 00
Nieuwenhuys.....	Quartermaster	1,080 00
Stelcher.....	Physician	600 00
Watson.....	Nurse	720 00
Winsten.....	Clerk	480 00
Fitzgerald.....	Lineman	720 00
White.....	Engineer	1,200 00
Kellogg.....	Agriculturist	900 00
Townsend.....	Dairyman	600 00
Snyder.....	Carpenter	780 00
Badler.....	Shoemaker	780 00
Wagner.....	Tailor	780 00
Arwine.....	Laundryman	720 00
Whipple.....	Teacher	600 00
Slater.....	Teacher	600 00
A. Craske.....	Teacher	600 00
Ernie Snyder.....	Cook and Baker	900 00
Lang.....	Housekeeper	480 00
I. Charlton.....	Night Watch	540 00
King.....	Night Watch	540 00
Chittenden.....	Minister	50 00
Smith.....	Minister	50 00
Alleson.....	Minister	50 00
Rambo.....	Minister	50 00
Moens.....	Priest	50 00

STATE SCHOOL FOR GIRLS.

<i>Name</i>	<i>Position</i>	<i>Salary Per Annum</i>
Campbell.....	Superintendent	\$1,800 00
Lowling.....	Assistant Superintendent	1,200 00
E. Wright.....	Agriculturist	900 00
Bunter.....	Matron	720 00
Playman.....	Matron	720 00
Ludington.....	Matron	720 00
Emmie Goff.....	Assistant Matron	240 00
R. Clarke.....	Assistant Matron	240 00
B. Ash.....	Assistant Matron	240 00
Lowling.....	Housekeeper	480 00
Virtue.....	Housekeeper	480 00
M. M. Snively.....	Housekeeper	480 00
Campbell.....	Nurse	720 00
E. Millay.....	Domestic Science	720 00
Butherland.....	Sewing Teacher	240 00
L. Worth.....	Teacher	720 00
C. Cronin.....	Teacher	720 00
Vaughn.....	Engineer	1,200 00

STATE REFORMATORY.

<i>Name</i>	<i>Position</i>	<i>Salary Per Annum</i>
B. Olson.....	Superintendent	\$3,000 00
Miller.....	Accountant	1,200 00
Stockwell.....	Physician	1,200 00
Wilcox.....	Executive Officer	1,500 00

<i>Name</i>	<i>Position</i>	<i>Per Annum Salary</i>
C. W. Iffert.....	Agriculturist	1,020 00
B. S. Elwanger.....	Night Captain	1,020 00
S. J. Knapp.....	Detail Officer	900 00
S. C. McGee.....	Steward	900 00
G. A. Nicol.....	Tallor	900 00
E. G. Jellison.....	Truckman	720 00
Jno. W. Mills.....	Engineer	720 00
A. Erickson	Night Watch	720 00
S. K. Paul.....	Night Watch	720 00
A. B. Hooper.....	Night Watch	720 00
J. F. Byland.....	Overseer	900 00
Pierce O'Connor	Overseer	900 00
Wm. A. Willson.....	Overseer	780 00
P. M. Laizure.....	Overseer	720 00
C. W. Hadlock.....	Overseer	720 00
E. Renard	Overseer	720 00
J. L. Brady.....	Guard	720 00
W. V. Kennon.....	Guard	720 00
R. W. Byars.....	Guard	720 00
Arthur Olson	Guard	720 00
C. S. Beal.....	Guard	720 00
F. L. Oliver.....	Guard	720 00
Fred Frohning	Guard	720 00
J. M. Tadlock.....	Director of Education.....	1,800 00
Frank S. Fearing.....	Teacher	720 00
W. Withington	Chaplain	960 00
D. P. Kelly.....	Priest	240 00

CAPITOL BUILDING AND GROUNDS.

<i>Name</i>	<i>Position</i>	<i>Salary Per Annum</i>
A. B. Giblett.....	Engineer	\$1,500 00
Frank Imlay	Fireman	900 00
G. S. Prince.....	Fireman	900 00
E. S. Horton.....	Watchman	900 00
O. C. Nally.....	Janitor	900 00
M. J. McGlynn.....	Janitor	900 00
R. J. Wilson.....	Janitor	900 00
James Lupton	Janitor	900 00
Marie Jensen	Janitress	900 00
Fred Schomber	Elevator	780 00
B. F. Dorsey.....	Gardener	750 00

TEMPLE OF JUSTICE.

<i>Name</i>	<i>Position</i>	<i>Salary Per Annum</i>
L. A. Coons.....	Custodian	\$1,200 00
E. J. George.....	Janitor	900 00
S. C. Willey.....	Fireman	900 00

REPORT OF STATE DENTIST.

Honorable State Board of Control:

GENTLEMEN: I herewith have the honor of reporting to you the results of my examinations and treatments of the state charges that have come under my care in the various state institutions covering the period of this biennium from October 1, 1914, and ending September 30, 1916.

During the past 22 months of active employment there were 4,766 patients examined and 3,348 patients receiving dental service.

The reports show that 57 per cent of the incoming patients had previously received dental attention.

The total number of teeth filled were 4,558 amalgam fillings, 997 cement fillings, and 61 root fillings. There were 1,099 cleaning or scaling cases, and 4,187 teeth extracted.

The above service was rendered at a cost of \$1.01 per patient and the state in salary and material \$3,372.80, or a saving to the state compared with ethical prices for same work of \$7,053.20.

The Northern Hospital required one month and four days to commence dental service. All patients here at this time were transferred from the Western Hospital and were in much need of dental service; 59 per cent had never received dental care.

I followed the same rule in the Northern Hospital as I have in all other institutions, which was to examine the mouths of all the patients and save all of the teeth possible and to do what other work the conditions would permit. The following work was rendered:

examined	283	Cement fillings	42
receiving service.....	201	Scaling or cleaning.....	54
amalgam fillings	205	Extracting	448

The above service at ethical prices \$589.00, cost to state in salary and material \$189.16, average cost 94 cents.

At the State Reformatory about three months were required to commence the dental services.

Forty-three per cent of incoming inmates had not received previous dental service and the population being large this time and changing often made the volume of service extensive.

The following service rendered here:

examined	442	Root canal fillings.....	15
amalgam fillings	797	Scaling or cleaning.....	105
cement fillings	194	Extracting	300

The above service at ethical prices \$1,536.25, cost to state in salary and material \$461.39, patients receiving service 364, average cost to the state per patient receiving service \$1.27.

The State Penitentiary required two months and ten days to commence dental service.

Fifty-nine per cent of incoming inmates had not received previous dental care.

The following service was rendered:

Patients examined	728	Root canal fillings.....	4
Amalgam fillings	584	Scaling or cleaning.....	164
Cement fillings	98	Extracting	429

The above service at ethical prices \$1,264.25, cost to state in salary and material \$365.85, patients receiving service 460, at an average cost of 80 cents.

The State Training School for Boys required about one month to complete dental service.

Seventy-five per cent of incoming boys had not received previous dental attention.

The change in population here is frequent and the filling of teeth extensive. The following service was rendered:

Patients examined	178	Root canal fillings.....	4
Amalgam fillings	237	Scaling or cleaning.....	61
Cement fillings	42	Extractions	66

Above service at ethical prices \$455.25, cost to state in salary and material \$151.82, boys receiving treatment 139, average cost of \$1.09.

The State School for Girls required two weeks to complete dental service.

Fifty-six per cent of the girls entering the school had not received previous dental attention. The filling of the teeth here, as in all of the state schools, is the most urgent of dental requirements.

The following dental service rendered here:

Patients examined	80	Root canal fillings.....	5
Amalgam fillings	106	Cleaning	18
Cement fillings	39	Extracting	39

The above service at ethical prices \$234.25, cost to state in salary and material \$77.56, girls receiving service 63, average cost of \$1.23.

At the Institution for Feeble Minded I spent two months.

This was my first visit to this school and I was amazed at seeing the children so happy and contented, and looking upon the school as their home with all that a home implies, in spite of their great affliction.

Eighty-five per cent of the incoming children had not received previous dental care, and attention at this time was much needed.

I examined the teeth of all the children and rendered the following service:

Patients examined	448	Root canal fillings.....	4
Amalgam fillings	530	Cleaning or scaling.....	115
Cement fillings	116	Extractions	617

Above services at ethical prices \$1,237.50, cost to state in salary and material \$339.00, children receiving service 363, average cost 93 cents.

At the Eastern Hospital I spent three months and four days.

Fifty-one per cent of incoming patients had not received dental care. While there were many new patients requiring work, the condition of the teeth as a whole were much better than I found them on my first visit. The following service rendered:

Patients examined	1088	Root canal fillings.....	8
Amalgam fillings	521	Scaling or cleaning.....	180
Cement fillings	117	Extracting	783

Above service at ethical prices \$1,398.50, cost to state in salary and material \$541.39, patients receiving service 639, average cost of 86 cents.

At the State School for Deaf, I spent twenty-four days.

This was my first visit to this very interesting school.

Fifty-seven per cent of the children had not received previous dental care. The teeth of the children should be cared for at least once a year. The following work was rendered:

Patients examined	126	Root canal fillings.....	2
Amalgam fillings	216	Cleaning or scaling.....	24
Cement fillings	47	Extracting	114

Above service at ethical prices \$411.75, cost to state in salary and material \$121.78, children receiving service 98, at an average cost of \$1.24.

The State School for Blind required two weeks' time.

This was my first visit here, and while at first I noticed their affliction, one carries away with them a much deeper impression, not only of their marvelous strides in their school work, but that they seem to get more joy out of their school life than the more fortunate children do.

Sixty-seven per cent had not received previous dental care, and the work was much needed at this time. They should have their teeth looked after each year. The following shows work done here:

Children examined	60	Cleaning	17
Amalgam fillings	109	Extracting	71
Cement fillings	39		

The above work at ethical prices \$232.00, cost to state in salary and material \$65.57, children receiving service 50, average cost of \$1.31.

The State School for Girls this time required fourteen days; 58 per cent entering since my last visit had not received previous dental care. The following dental service was rendered:

Patients examined	92	Root canal fillings.....	5
Amalgam fillings	146	Cleaning	20
Cement fillings	27	Extracting	30

Above service at ethical prices \$268.25, cost to state in salary and material \$72.66, patients receiving service 76, average cost 96 cents.

The Washington State Reformatory this time required two and one-half months.

Fifty-three per cent of the incoming men had not received previous dental care.

The population was not as large as I found on my last visit but they were nearly all new patients and in much need of dental care.

The following service was rendered:

Patients examined	372	Root canal fillings.....	12
Amalgam fillings	503	Cleaning or scaling.....	119
Cement fillings	151	Extractions	261

Above service at ethical prices \$1,129.00, cost to state in salary and material \$398.76, patients receiving service 299, average cost \$1.33.

At the Western Washington State Hospital, I had spent nearly four months when this report, ending September 30th, was made out. The work here is not finished, but this report shows the work done to this date.

Forty per cent of incoming patients had not received previous care. The change in population has been great and therefore plenty of work to be done. The condition of the teeth as a whole is better than on my last visit. The following service rendered:

Patients examined	874	Root fillings	7
Amalgam fillings	604	Cleaning or scaling.....	222
Cement fillings	95	Extracting	1029

Above service at ethical prices \$1,670.00, cost to state in salary and material \$587.86, patients receiving service 596, average cost of 99 cents each.

In closing, I wish to express my appreciation of the uniform courtesy and assistance tendered me by the various superintendents and also by your honorable Board.

Respectfully submitted,

J. H. WEBSTER, *State Dentist.*

REPORT OF SUPERINTENDENTS.

WESTERN STATE HOSPITAL.

Honorable State Board of Control, Olympia, Washington.

GENTLEMEN: We have the honor to submit herewith the Eighth Report of the Western State Hospital for the past biennium, beginning October 1, 1914, and ending September 30, 1916.

Review of Movement of Population and Allied Statistics.—The population at this hospital on October 1, 1914, totaled 1,501 (934 male and 567 female), of whom 56 cases were out on parole and 10 by reason of escape, leaving an actual total population at the time of 1,435 (901 male and 534 female).

During the first year of the biennium, there were admitted 586 (393 male and 193 female); 551 vacancies were created through discharges, 170 deaths and 221 (168 male and 53 female) transfers to Northern State Hospital at Sedro Woolley and one (male) transfer to the Eastern State Hospital at Medical Lake, Washington, leaving a population on October 1, 1915, of 1,536, which included 159 cases on parole or absent on escape, making an actual total population at the hospital on October 1, 1915, of 1,377 (820 male and 557 female).

During the second year of the biennium, 278 patients were admitted (154 male and 111 female); 351 vacancies occurred through 211 discharges, 137 deaths, and 3 transfers to other state hospitals, leaving a population on September 30, 1916, of 1,463. There are 137 cases on parole or absent by reason of escape, which leaves an actual total population at the hospital on September 30, 1916, of 1,326 (770 male and 556 female).

The percentage of recoveries to the number admitted the first year was 31 and in the second year 30.57 per cent. This method of computing recoveries was based upon the total number of recoveries occurring in the whole patient population compared to the number of admissions within a given year, and is misleading, and is recorded here for purposes of comparison with previous reports. In the year ending September 30, 1915, there were 586 admissions, of whom up to and including September 30, 1916, 90 had been discharged as recovered, or a percentage of recoveries of 15.35. In the year ending September 30, 1916, there were 278 admissions, of whom up to and including September 30, 1916, 14 were discharged as recovered, or a percentage of recoveries of 5.03. The percentage of recoveries, as shown on appended page 17, differs from that formerly used and, if continued, will give statistics of value and the percentage of recoveries quoted here as they are credited to a known number of admissions. The table also shows the percentage of recoveries to the number of admissions.

The term "recovery" as applied to the insane is usually used in rather an elastic sense, but we have endeavored to apply it here with as much precision as possible. Analysis of the statistics of this hospital show that since 1871, we have had to date 10,469 admissions, and that there have been 6,295 discharges since 1871 to date, and we have at present 110 patients absent on parole, making a total of 6,405, allowing for transfers to other hospitals and deportations. These statistics are of considerable value in showing what service has been rendered to the public by this hospital, as practically out of every two patients that have been admitted since 1871, one has been returned to society.

The average duration of life among our chronic patients in this hospital has been approximately four years. This is ascertained by figuring the average length of life of the 2,778 deaths that have occurred among the patients since the year 1871.

The average hospital residence of patients that were discharged or paroled has been 17 1-3 months. This result is computed on an analysis of the 6,295 discharges occurring since 1871.

The above estimates we consider *minimum* estimates, as we still have patients living in the hospital who have been here practically since the opening of the institution, and who will eventually be included in these tables, thus increasing both percentages.

Alien Insane and Non-Residents.—During the past two years, our population has been decreased through deportations and transfers as follows:

	Male	Female	Total
Deported to foreign countries at expense of federal government...	17	5	22
Deported to foreign countries at expense of State of Washington.	10	1	11
Deported to foreign countries without expense to either the State of Washington or to the federal government.....	9	1	10
Transferred from this state to their native states without expense to the State of Washington.....	38	34	72
Transferred from this state to their native states at expense of State of Washington.....	2	.....	2
At present held in hospital on United States warrant awaiting deportation	4	1	5
Totals.....	80	42	122

The following tables show the number and percentage of foreign born patients as compared to the native born patients among those admitted during the biennium ending September 30, 1916:

FOR THE YEAR ENDING SEPTEMBER 30, 1915.

	Number Admitted	Foreign Born	Native Born	Place of Birth Unknown	Per Cent. of Foreign Born	Per Cent. of Native Born
Male	393	185	195	13	47.07	49.64
Female	193	70	122	1	36.27	63.21
Totals.....	586	255	317	14	43.51	54.00

FOR THE YEAR ENDING SEPTEMBER 30, 1916.

	Number Admitted	Foreign Born	Native Born	Place of Birth Unknown	Per Cent. of Foreign Born	Per Cent. of Native Born
.....	167	74	89	4	44.31	58.29
.....	111	41	70	.....	36.99	68.08
Tals.....	278	115	159	4	41.36	67.19

The following table shows the number and percentage of foreign patients as compared to the native born patients among those present at the Western State Hospital as of census taken on July 19, 1916:

	Total in Hospital	Foreign Born	Native Born	Per Cent. of Foreign Born	Per Cent. of Native Born
.....	780	490	300	61.53	38.47
.....	561	254	307	45.27	54.73
Tals.....	1,341	734	607	54.73	45.27

comparison with the following table is interesting and would indicate that our alien population contributes two and one-half as many insane as the native population. This percentage is the same as in New York state:

Percentage of Total White Population in the State of Washington,
Represented by Each Nativity or Parentage Group,
as Taken From the Census of 1910.

Native whites of native parentage.....	52.8 Pct.
Native whites of foreign or mixed parentage.....	25.5 Pct.
Foreign born	21.7 Pct.

Table No. 6 is of especial interest in this connection.

Deportations during the past two years have been exceedingly difficult owing to the war and for a period of time ceased entirely, and was only resumed on a limited basis. A decided increase should be expected after the war. Deportations at state's expense have been hampered by similar and other reasons, but the results obtained compare favorably with other states with which we have been in comparison. I wish to acknowledge the courteous assistance given to me in this work by officials connected with the New York bureau of Immigration.

In the past a great many estimates, all running very high, have been made of the possible saving to the state if the aliens were de-

ported, who would be subject to deportation under chapter 82, Session Laws of 1915. While we think it is very likely that we will always be able to deport a certain percentage of our aliens under this act, the percentage will never be as large as the early estimates. At the close of the war we should be able to deport quite a number, but it is impossible to make an estimate of what this number would be at the present time.

Review of Movement of Employees.—Dr. A. P. Calhoun resigned effective November 1, 1914, and Dr. W. N. Keller succeeded him as superintendent on the same date.

Dr. G. O'N. Ireland, third assistant physician, resigned effective July 1, 1915, and Dr. Walter Vose Gulick was appointed to this vacancy.

Dr. C. E. Sutherland succeeded Mr. H. H. Montgomery as accountant on February 15, 1915.

Mr. V. W. Richards has been promoted to manager of the livestock department.

Political influences, which have been very pernicious in the development of hospitals for the insane the country over, have been absolutely disregarded in making changes among the employees. Age, experience, sobriety, even temperament, good judgment and dependability have been the main qualifications in making new appointments. The result has been that the hospital has developed a very effective organization.

REVIEW OF IMPROVEMENTS AND ALTERATIONS.

(A) *Buildings, Etc.*

1. Completion of female hydrotherapy on June 1, 1915.
2. Completely overhauling and remodeling ward one, placing in new floor, removing wainscoting and putting on hard plaster.
3. Completely overhauling and remodeling wards 16 and 17, new plumbing, and walls made over.
4. Remodeling dining room on ward 9.
5. Remodeling stairway connecting wards 1, 2 and "K."
6. Repainting metal roofs of all main buildings.
7. New horse stable nearing completion, 40 by 110 feet, built of tile, containing 14 single stalls and 2 box stalls; vats for solid and liquid manure constructed for stable.
8. Wagon, truck and implement shed completed alongside of horse barn, 16 by 108 feet, containing spaces for nine wagons and farming implements.
9. Separate dairy barn built for tubercular cows, 36 feet wide by 108 feet long, containing milk-room, feed-room, and stanchions for 44 cows.
10. Electric pump installed at pump station in May, 1915, capacity 750 gallons a minute. Installation of weirs at each of the two springs forming our main water supply.
11. Incinerator completed.

Drug-room remodeled.

Main trunk line of sewer extended into Chambers creek, so
let of sewer will be under water at low tide.

New addition to piggery.

Electric iron system (36 electric irons) installed in laundry
1915.

Cement floors in chicken houses.

Twenty-nine new portable chicken houses.

Dairy barn remodeled in November, 1915, three large venti-
lating installed and reinforcement provided for roof.

Baseball park remodeled.

Old water-tank and band-stand torn down.

Annex being enlarged to double present capacity and will ac-
commodate 90 men when completed.

Work inaugurated in reflooring ward "H."

Work inaugurated in remodeling ward 5.

Work inaugurated on construction of new water sections for
wards 14, 12, 11, and 10.

Work inaugurated on new root-house.

Ward 14 remodeled. Portion of it torn out and made into a
central dining-room.

Basement under center remodeled and rat-proofed.

Plans for a new crematory are under consideration.

Grounds, Roadways, Lawns, Etc.—A new nursery (one acre)
has been established in which are being grown new trees and bushes
on the hospital grounds.

During the past two years, a topographical map has been made of
the hospital grounds, which embrace a total of 624 acres, and a resurvey has
been made, showing the old surveys to have been incorrect. All of the
boundaries have been changed with the exception of about 1,500 feet. This
has made an increase of 5.29 acres of new ground to the hos-
pital.

This work took over three months. The engineers, at the same
time, made plans and estimates for installing a new irrigation system
in connection with Waughop's lake, which will reclaim in the neigh-
borhood of 93 additional acres.

Work on building concrete public highway between Stellacoom lake
and the hospital grounds was commenced in July, 1916, and
in the course of construction, this work being done in conjunc-
tion with the county commissioners of Pierce county. Through their
aid we are building a concrete paving, 16 feet wide (19 feet
overall) and 6 inches to 7 inches thick, connecting up with one of
the main county roads, and extending to and through the hospital
grounds, a total distance of two miles. The road is about half com-
pleted.

Through the hospital grounds this road will be reinforced with
steel. The concrete used in this road to date has been tested
at the University of Washington through the courtesy of the United

States bureau of forestry. The results of these tests show the concrete to be of excellent quality.

A new system of landscaping has been provided, doing away with a multitude of small shrubbery and through trimming trees high, providing for large open spaces and broad vistas.

Three thousand and twenty trees have been trimmed on the grounds, as follows:

Number of trees trimmed on lawns.....	310
Number of trees trimmed elsewhere.....	2,695
Number of trees on which modern tree surgery was performed.....	15
Total.....	3,020

Modern tree surgery, involving the excavation of rotted cavities and filling in with reinforced concrete has been done in some of the better ornamental trees, and experts were at first engaged for this purpose.

Seven thousand two hundred and sixteen feet of new hedge has been started about the farm and cottages and main grounds, including California and golden privet and Osage orange.

Two thousand six hundred and seventy feet of new driveways have been built, part of which will be bordered with locust and elm trees.

New tennis courts and new croquet courts established.

Several times during the past biennium we have received plants from the United States department of agriculture to use for ornamental purposes on the lawn.

Completed new stone fence with four ornamental gateways along the main highway, 1,737 feet in all, and an ornamental stone lodge built at main entrance, consisting of one room, fireplace and rain-porch.

Twenty-two acres of new ground has been broke and plowed and prepared for lawn, as follows:

In front of Ward 15.....	4 acres
In old cow pasture.....	5½ acres
Back of the cottages.....	12¼ acres
Total.....	22 acres

Four additional acres have been placed in lawn, and of the acreage plowed for new lawn, water mains have been laid over nine and one-half acres.

The following statement gives the number of feet of pipe laid on the lawn and farm during the past biennium:

Lawn pipe extension, 2-in. galv. pipe.....	1,925 ft.
Lawn pipe extension, 1-in. galv. pipe.....	1,875 ft.
Lawn pipe extension, 1½-in. galv. pipe.....	550 ft.
Lawn pipe extension, 1¼-in. galv. pipe.....	200 ft.
Lawn pipe extension, 3-in. galv. pipe.....	375 ft.
Lawn	4,725 ft.
Farm pipe extension, 1-in. galv. pipe.....	600 ft.
Farm pipe extension, 1½-in. galv. pipe.....	200 ft.
Farm pipe extension, 1¼-in. galv. pipe.....	100 ft.
Farm pipe extension, 2-in. galv. pipe.....	275 ft.
Farm pipe extension, 3-in. galv. pipe.....	950 ft.
Farm	2,125 ft.
Total number of feet laid on both lawn and farm during past biennium	6,850 ft.

clusive of the new land plowed on the farm, 13¼ acres have been plowed and put in clover and oats, near the baseball park with the intention of eventually placing into lawn.

On the main grounds, 64 1-5 acres have been cleared in the neighborhood of the gulch and about the two springs and the old baseball

park. One-fifth of the gulch has been entirely cleared, which includes the creek and a portion of upland, about 27 acres. Of this, 10 acres have been seeded and, in this area, we have constructed 2,774 feet of new paths and remodeled 5,057 feet of old paths. Twenty-nine new wells have been constructed in Murray creek. In one of the dams 4,520 yards of blue clay was used. In clearing the gulch we used 470 cords of serviceable wood and 3,600 good cedar posts. This wood was obtained from fallen and dead timber, the good trees left standing. Eight hundred square feet of cribbing was installed and a trestle 335 feet long; 4,000 new plants were set out in the gulch; a lot of drainage tile was used in this gulch, and a safety cut-off sewer 150 feet long was installed.

In August, 1915, we received the first prize from the Tacoma flower show in both first and second classes, and second prize for the best exhibit made at the show. We were not allowed to compete in the dahlia exhibit. Exhibits were made during the past years at the Prairie-Grange fair, North Yakima, Spokane, Puyallup fairs. Wherever allowed to compete, our garden products took prizes.

The water supply of the hospital is spring water and is the same as since 1871. There has never been an epidemic from this water. As much water is provided from our available supply as has been used, and a great deal more could be available. Weirs have been installed at our two main springs, and our measurements are made weekly and recorded.

A system of comparative records have been installed in the dairy herd and also of the water supplied and consumed, and of the consumption.

Farm.—The following is a list of the important improvements and results secured at the farm, during the past two years:

Over hundred and thirteen cords of wood were cut.

Seventeen acres of land cleared of stumps and trees.

Twenty-eight acres of new land plowed; four acres of this has been in crop and the rest is ready for seeding.

Hay has been raised on the uplands with fair success.

We have cured a large percentage of our own hams and bacons, and expect to be able to provide all of this in the near future.

Corn has been raised with very good results on both high land and low.

A little over 70 tons of green corn was raised on seven acres in 1915, and we expect to get at least 150 tons this year from the same acres. Eight varieties of corn have been tried out, of which

five of these have proven very good, maturing fairly well before the frosts came.

Five varieties of field peas and vetches have been raised in small patches with good results. These experiments have been carried on in conjunction with the Western Washington Experiment Station.

Fifteen hundred feet of Osage orange hedge has been set out.

Horses took second prize at the Puyallup fair, 1915.

During the past two years, the following results have been obtained from Reed's ranch.

Produced during the year ending September 30, 1915:

22 tons kale, from 2¼ acres of the bottom land
12¼ tons carrots, from 1-3 acre of the bottom land
30 tons beets, from 4-5 acre of the bottom land
38 tons corn, from 8 acres of the bottom land

This bottom land was very much run down or worn out, but after manuring these few acres, we received the above results. The balance of the ranch was used as pasture, an average of twenty heifers being pastured from April 15 to September 30, 1915.

For the year ending September 30, 1916:

Up to September 30, 1916, the ranch has produced 55 tons of green corn. The beets have not been pulled yet, but should yield about 100 tons from three acres of bottom land. Kale has not been cut, but will have 15 tons on two and one-half acres. All corn was raised on the upland, only a part being manured. From 20 to 25 Holstein heifers have been pastured at Reed's ranch from April 15 to September 30, 1916.

With plenty of fertilizer, this ranch could be made into a fairly profitable farm if farmed in conjunction with the hospital farm, but will not pay to farm independently as was done until three years ago. The irrigation system should be improved at moderate expense, in order to get best results from crops.

Special attention is called to the following summary of our profit and loss accounts of the different departments of the farm, which is here exhibited for the first time:

PROFIT AND LOSS STATEMENT.

Farm, Garden and Livestock Departments for Biennium Ending
September 30, 1916, and Produce Sold, Raised
and Consumed.

<i>Poultry Department</i>	
Value of all produce raised.....	\$19,620 69
Natural increase in inventory value of poultry.....	1,317 20
	<u>\$20,937 89</u>
<i>Swine Department</i>	
Value of all produce raised.....	\$17,194 00
Natural increase in inventory value of swine....	1,528 00
	<u>18,722 00</u>
<i>Dairy Department</i>	
Value of all produce raised.....	37,552 97
<i>Farm and Ranch Department</i>	
Value of all produce raised.....	1,998 61
<i>Garden Department</i>	
Value of all produce raised.....	21,734 56
Total produce or income—	
Farm, garden and livestock departments.....	<u>\$100,946 03</u>

Expenditures.

<i>Dairy Department</i>	
Operating expenses	\$10,793 72
<i>Horse Department</i>	
Operating expenses	12,625 87
<i>Swine Department</i>	
Operating expenses	\$20,995 71
Readjustment of inventory value of herd ac-	
count of bovine tuberculosis.....	4,361 00
Decrease in livestock due to slaughtering tuber-	
cular cattle and meat condemned.....	965 00
Natural decrease in livestock due to stock	
slaughtered for food and stock sold.....	1,504 00
	<u>27,825 71</u>
<i>Field and Ranch Department</i>	
Operating expenses	2,538 72
<i>Garden Department</i>	
Operating expenses	\$2,986 85
Water for irrigation (19,240,500 gals.).....	146 25
	<u>3,132 90</u>
Utilities, all departments.....	5,840 00
5 per cent of stable expense.....	2,059 00
Depreciation on farm buildings, machinery, implements, etc.,	
5 per cent per annum (inventory value, \$28,517.05)....	2,851 70
Interest on investment at 3 per cent per annum (land, build-	
ings, implements and stock; investment, \$72,905.85).....	4,374 35
	<u>\$71,541 97</u>
Total expense of farm, garden and livestock depts.....	
Net profit	29,404 06
	<u>\$100,946 03</u>

The above report shows a net profit of \$29,404.06. No valuation has been placed upon patient labor. The practical operating profit is \$11, or \$14,712.05 in excess of the figures given above. This is due to the fact that in the above table we have charged off \$7,226.05 for depreciation at 5 per cent per annum and for interest on the investment at 3 per cent per annum. We have also charged off \$5,326.00 on account of loss when we re-inventoried the dairy herd, and \$2,160.00 charged to the swine department, on account of kitchen swill.

Products, such as manure, have been charged and credited as accounted for by the United States government systems of farm accounting, but inasmuch as it has all been produced and consumed in the department, it does not influence the net profit which has been determined.

Dairy Herd.—Tuberculosis was found among our dairy herd in November, 1914. The herd was tested under the supervision of the Commissioner of agriculture in January, 1915, and has been tested every six months since.

From the original herd, all the milch cows, excepting five, reacted. Separate herds have been established, one consisting of our reactors and the other non-reactors, and the five cows of the original herd which did not react were included among the reactors. We have

built a new isolated barn and use separate pasture and separate set of employes for our infected herd. All the milk from the reacting herd is boiled before using. The offspring from the reacting herd is being raised on the Bang and Ostertag system, as advised by the United States department of agriculture, and to date we have had no reactors among them. This method of raising healthy livestock from a tuberculous parentage may seem at first thought full of risk, but experience has proven its practicability. The management of these herds is conducted to meet the approval of the state commissioner of agriculture.

In February and March, 1915, the dairy herd was reinvoiced, and a new system of individual records was introduced, using forms recommended by the agricultural department of the University of Wisconsin. All cows producing less than 5,000 pounds of milk yearly were slaughtered.

We have visited, during the past biennium, three public sales conducted under the auspices of the Western Washington Holstein Breeders' Association, besides several leading livestock and dairy farms.

We have recently added to our reacting herd 26 pure-bred registered Holstein-Friesian cows belonging to the herd of Mr. Calvin Phillips at Greenbank, Washington. This herd is well known as one of the highest grade pure-bred herds in the northwest. These animals pass an excellent physical examination and are good milkers, but have reacted once to a tuberculin test. Some have not reacted on a second test six months later. Under the terms of our agreement with Mr. Phillips in a few years we shall be the owners of this herd, which should prove to be the foundation of a high-grade pure-bred Holstein-Friesian stock for our dairy. We also purchased of Mr. Phillips a young bull, a direct grandson of the King of Pontiacs, with a fine record on the dam's side.

The daily production of milk has varied from 900 to 2,200 pounds and with the increase in the size of the herd could be made more. We have never made any of our own butter, and we feel by installing a modest creamery we can separate a portion of our milk and thus manufacture at least a part of the butter which we consume.

General Considerations.—The general health of the patients has been excellent. A general and sanitary inspection has been inaugurated once weekly.

A number of major and minor surgical operations were performed, a list of which is appended in this report (Table No. 24).

Thanks are due to a great many outside physicians for assistance and valuable service rendered during the past two years. Special mention may be made of Dr. C. Stuart Wilson of Tacoma, who has done most of our Wassermann and spinal fluid work free of charge; Dr. D. H. Bell of Tacoma, who has made routine ophthalmoscopic and general examinations of the eyes of 261 patients (104 male and 157 female); Drs. Clinton T. Cook and Brock E. Cohoon of Seattle, who have also examined the eyes and ears of patients; Dr. J. S. Davies of

a, who performed a couple of mastoid operations. Dr. Rebekkah of Chicago was engaged and gave instructions to male and female attendants in the hydrotherapy. Thirteen attendants took this course.

At the completion of the female hydrotherapy on June 1, 1915, the male and female hydrotherapies were operated on an eight-hour basis daily, whereas formerly the male hydrotherapy had been on a three-hour daily basis. We are in hopes to further extend the hours in this department, which is especially valuable. Demonstrations were given to classes of nurses from the Tacoma General Hospital on both male and female hydrotherapies.

More open wards were established. Benches are being gradually removed from the wards where formerly used, and chairs installed. Use of china is being extended throughout the dining-rooms in place of enamelware. The practice of having female attendants on the wards has been continued and will be extended as far as practicable.

A new method of reporting products from the farm, dairy, garden, orchard, stable, kitchen and dining-room, and grounds and roadways was inaugurated in January, 1916.

All scales in the different departments have been inspected regularly by the department of weights and measures. In purchasing supplies for the farm, wherever possible, we have had the feed inspected by the state grain inspector, and have, in one or two instances, been obliged to condemn and refuse to receive shipments on this account.

Visits were made by the Superintendent to the Northern State Hospital at Sedro Woolley, Wash., the Eastern State Hospital at Medical College, Wash., the Soldiers' Home at Orting, Wash., the Washington State Reformatory at Monroe, Wash., the Oregon State Hospital at Salem, Ore., the Chicago Psychopathic Hospital, the Chicago State Hospital at Joliet, Ill., the Cook County Hospital at Chicago, the Illinois State Hospital at Kankakee, the State Psychopathic Institute at Kansas City, Mo., the State Hospital for Insane at Ingleside, Nebraska, and also the State Hospital at Lincoln, Nebraska. Attended meetings on the trip of the American Alienists and Neurologists held in Chicago, June 19 to 24, 1916.

Accounts of the hospital were inspected and checked up by the State Bureau of inspection and supervision of public offices.

The policy has been pursued of endeavoring to keep all patients, wherever possible, engaged in some useful form of occupation, preferring outdoor occupations. We have been much more successful in this on the male, than on the female side, where our industrial departments are already crowded. (See Table No. 23 for average number of patients employed during the past biennium.)

The usual moving picture shows, dances, baseball, and other forms of recreation have been employed.

The advantages of useful occupation and recreation in the care of the insane is clearly established, and while we feel that advances have been made along this line, there is still much more to be accomplished in the future, dependent upon appropriations from the legislature. Our present amusement hall, which was built in 1886, and was then large enough for the patient population at that time, is now too small and will only accommodate less than half the patients who could make use of it.

The policy of publicity has been adopted.

The state dentist paid us his regular visit, and is still engaged in looking after the teeth of the patients.

We favor the eight-hour system among the attendants. Their present hours are altogether too long. While it is impossible to say exactly how much of an increase this would be in our payroll, we believe it would increase the payroll for the attendants only about 25 or 30 per cent.

We believe it inadvisable to have the attendants' living quarters on the same wards with patients, and think better service is rendered when quarters are provided elsewhere on the grounds.

Weekly fire drills have been reinaugurated and the fire equipment has been inspected by experts. A large portion of the old fire hose has been condemned and new hose and equipment were installed in December, 1915. Remodeling was done on all wards where it was necessary to improve the access to fire escapes.

On June 1, 1916, a new mail service was inaugurated at this hospital, the mail arriving and being dispatched via the Pacific Traction car line which passes our gates, which is much more convenient than the old system when the mail arrived and was dispatched on the old Stellacoom T. R. & P. car line and it was necessary to employ a messenger who, with several patients, made two trips daily three-quarters of a mile distant carrying down the outgoing and bringing up the incoming mail.

Legislation Suggested.—We would suggest that some legislation be enacted which will permit persons to voluntarily place themselves into the care of the hospital, when they may be suffering from nervous diseases or threatening mental disorder, and that they should be received for a period of one month or more (not to exceed three) by an agreement which shall also specify the time, signed by them at the time of admission, and they may renew said agreement at the end of one month or more (not to exceed three), but no agreement should be deemed to authorize their remaining unless signed in the presence of some adult person attending as a friend of the person applying in the presence of and also by a duly qualified medical attendant. During the past two years we have had numerous requests by patients and physicians desiring to avail themselves of the facilities of this hospital, but they are unwilling to go through the ordeal of a formal court procedure. We think legislation along this line is very urgently needed, and would help considerably in elevating the status of the hospital in the community. Such patients should pay for hospital service.

Legislation providing for the licensing of private institutions for the care of the insane, providing for their inspection and proper supervision, and making specific provisions for the commitment of patients thereto. The necessity for such a law seems to us to be self-evident and we should not wait for abuses to occur before taking action. We would recommend the New York law in this respect.

Legislation providing for the appointment of a public administrator, guardian or officer, who will look after the legal affairs of those insane patients who have not friends or relatives who will interest themselves in their behalf. It seems to us that this is very important and we are satisfied many abuses exist which would be corrected by the appointment of such an officer.

We would recommend that a certain sum be appropriated yearly to be expended for a systematic investigation into the causes of insanity and the different problems connected with the care of the insane. During the past biennium, the state expended \$1,322,857.60 for the care of the insane in the three state hospitals. If one per cent of this money was devoted to well-directed research work, and the compilation of intelligent systematic statistics relative to the insane in this state, it would probably be of great value and would eventually result in savings which would more than pay for the amount expended.

Some measures should be taken to provide against the "dumping" into this state of the insane who are residents of other states, and wherever possible, we should have a practical reciprocity arrangement providing for the return of insane patients to those states of which they are citizens.

REQUESTS FOR APPROPRIATIONS FOR THE ENSUING BIENNIUM.

The following are the requests for appropriations for the ensuing biennium:

Maintenance

1450 patients at \$0.455	\$481,617 50
Furniture and Carpets	2,000 00
Library	500 00
Amusement Fund	1,000 00

Repairs and Improvements

1. Itemized

(a) Remodeling air courts	\$7,500 00
(b) Painting	10,736 00
1. Main buildings	\$9,000 00
2. Cottages	626 00
3. Farm buildings	1,110 00
(c) Fire escape	2,200 00
(d) Special repairs on 33 wards ..	5,700 00
(e) Farm	2,840 00
(f) Automatic stoker and installation....	2,500 00
(g) Plumbing on wards	3,700 00
(h) Electric fixtures	300 00
(i) Galvanized iron shingles	4,200 00
(j) Painting galvanized iron shingles....	300 00
(k) New irrigation system	5,400 00
(l) X-ray equipment	2,500 00
(m) Laboratory and surgery	1,200 00
(n) Repairs to cottages	1,500 00
	<hr/>
	50,576 00

2. Unitemized

General repairs and improvements	10,000 00
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6. *New Buildings*

1. Receiving hospital	\$168,000 00	
2. Detached power house.....	52,000 00	
3. New laundry and sterilizing washer.....	20,000 00	
4. Superintendent's cottage	10,000 00	
		250,000 00

7. *Farm*

1. Creamery building and equipment....	\$1,600 00	
2. Two silos and equipment.....	1,200 00	
3. One 2½ or 3-ton auto truck..	3,000 00	
		5,800 00

Grand total \$801,493 50

We desire to submit the following relative to the different items in this budget:

1. *Maintenance.*—We have placed the estimate of the population for the ensuing biennium at 1,450. We cannot make an estimate on expected yearly increase in patient population based on past experience, due to the fact that the districts from which the state hospitals draw patients were reclassified in 1915. We have recently had some decrease in our population, and especially during the past year on account of the operation of the dry law and the Harrison anti-narcotic act. The remarkable decrease due to these acts can be accurately determined by referring to Table No. 10 where it will be shown that this reduction in alcoholic and drug cases amounts to about 90 per cent. There is an increased tendency for commitments to be made to this hospital from Seattle, and if we should have our normal growth, we should expect anywhere from a 5 to a 10 per cent increase in other times. It may be possible after the war is over we can deport more freely both at the federal and at the state's expense, but this is problematical and of course we shall not be able to deport at the state's expense anything like the number that was formerly estimated.

If the improvements requested are granted, it will lead to more or less temporary confusion in our hospital management, which will entail extra temporary operating expense. Moving the power plant will probably mean an increased cost of its operation for some little time to come. The price of fuel oil has already advanced and during the past biennium we consumed \$2,688.40 worth of wood, which we produced ourselves, and with the erection of new buildings fuel consumption will be increased. Also with the erection of new buildings operating expenses will for a while show a relative increase per capita until their capacity has been reached.

The increase asked for in the payroll is considerable, but is necessary. We have at this hospital one physician to every 400 or 500 patients. The ratio should be one to every 250 or 300 patients. We have no pathologist whatever. Our night force is not large enough. We need more attendants. The average of attendants in this hospital varies from one attendant to every 17 or 18 patients. In most institutions the ratio is one to ten, or one to twelve, and in some institutions being as high as one to eight. With more room, we shall enlarge

an industrial department for women and will require another industrial teacher. Also with the new creamery, there will be needed one creamery man and butter-maker at \$75.00 per month.

Dry goods and clothing have all had a marked advance, especially in the cheaper grades, of which we use considerable, and will contribute to the increase of per capita cost.

During the past two years several factors have contributed to enable us to have a low per capita cost. Due to the large number of unemployed, the wages paid attendants was much less than at the present time, and for a while we got along without filling a vacancy in several high-salaried positions. An unusually heavy farm production in 1915 relieved the necessity of purchasing supplies in the open market.

We are very anxious to provide better night service; to provide for more advanced care for our epileptics and tubercular patients; to abolish basement wards and industrial departments operated in basements, to enlarge and improve the wards for the care of the bed-ridden and the infirm; and provide more up-to-date attention in the hospital wards on both the male and female sides, all of which will entail expense.

Our per capita cost compares very favorably with other similar institutions and very few can show as low a per capita cost as 45 cents when service has been considered. This could not have been done except for unusual advantages possessed by few institutions, namely: an abundant cheap water supply; unusually favorable power rates; sewer system, the main trunk line dropping 210 feet into tide water; excellent transportation facilities, cars being delivered within the grounds, as many as fifteen have been unloaded here at one time.

5. *Repairs and Improvements.*—In making estimates for appropriations requested in the budget for the ensuing biennium, we have employed architects to draw plans and submit estimates, and wherever estimates were made for painting, plumbing supplies or special equipment, we have engaged the services of those especially trained in these lines, and obtained itemized proposals.

(a) *Remodeling Air Courts.*—We have nine air courts. Seven of these face upon the main highway. This highway is being paved at the present time and is the road between the city of Tacoma and the village of Stellacoom one and one-half miles away. It is much more traveled than formerly. The street car line which formerly stopped in front of the institution now continues past five of these airing courts on its way to Stellacoom by a recent newly built extension, and a great many people pass by the hospital grounds. These airing courts are very public. We have had complaints from neighbors regarding their being more or less of a nuisance and there are a great many objections to them. The idea is to rebuild them and modernize them somewhat similar to the airing courts and sun parlors at the new hospital for the insane at Sedro Woolley.

(d) *Special Repairs on 33 Wards.*—The repairs needed for this purpose total \$15,703.30. From this we have deducted \$1,800.00, which repairs we expect to be able to make out of our repairs and improvement fund for the present biennium. We have also deducted \$2,497.50, the amount estimated for plumbing which is included in another item of the present budget. This leaves a balance of \$11,506.80. In order to reduce our request to the minimum, we divided this in two and we will endeavor to make at least 50 per cent of the needed repairs during the coming biennium. This will amount to \$5,700.00.

(e) *Farm.*—A new brooder heater, consisting of a distillate stove and tank, \$50.00. We expect to build one new brooder house and scratching shed, 16 by 32 feet, which will accomodate 1,200 chickens. The ordinary cost would be \$100.00, but we feel we can probably make this out of old lumber.

Replacing plank floor in cow barn with concrete. The present floor is becoming rotten, is worn out, and the underpinning is weak. This will have to be taken out by replacing with concrete. Our whole dairy barn floor will be of concrete which will assist greatly in cleanliness. The estimated cost for this improvement is \$300.00. A sleeping shed is very necessary, with a loft, for our cattle. The size of the proposed shed is 60 by 100 feet, and will accomodate about 100 head from our dairy herd; \$800.00 is the estimate for this improvement. Also, a sleeping shed for the young stock at \$300.00 is desired.

Also, a three-stall hospital for cattle, size 24 by 72 feet, \$150.00.

An increase is necessary in our calf barn. This will be an enlargement of our present calf barn which has a present capacity of 24 calves and consists of eight stalls, accommodating three calves in each stall. The enlargement requested will be 40 feet long by 16 feet wide, and will make room for eighteen additional calves in 6 stalls. The cost of this improvement will be \$200.00.

Twenty A-Shape Hog Houses for Swine.—These will be built on runners so a team of horses can drag the hog house around any place on the farm. These hog houses will accommodate one sow and litter. The present capacity of the farrowing houses is 36 stalls for 36 litters. During the past two years, we have initiated the curing of our own ham and bacon, and have been able to cure to date 905 pounds of ham at \$0.144, value \$130.32, and 1,055 pounds of bacon at \$0.1484, value \$156.56, or a total value of \$286.88. Our bill for ham and bacon for the year ending April 1st, 1916, was \$693.36 for ham and \$577.94 for bacon, or a total of \$1,271.30. We expect to increase our swine department and cure more of our ham and bacon and the improvement asked for is with this idea in mind. The expense will be \$300.00.

Wire Stock Fence.—Two thousand feet of poultry wire at four cents to five cents a foot, this to replace our present poultry wire which is rusty, and a few extensions. Total, \$100.00. Hog wire for new hog pasture, as the enlargement in the swine department will require more

pasture. This is rather expensive but necessary. The estimated expense is \$640.00.

This makes a total asked for the farm, under this heading of \$2,840.00.

(i) *Galvanized Iron Shingles.* On two sections as per estimate of contracting firms amount to \$4,200.00. The present roofing over these two sections is composed of tin shingles, 26 or 29 years old. Elsewhere over our buildings the shingles are of galvanized iron. These tin shingles have been in place a long time and are rusted through. About a year ago they were repainted and the leaks were covered with canvas in very many places. It is not thought that this roof will last through another biennium. Inasmuch as these roofs each cover a section of our main building, three wards to a section, a leaky roof can do a great deal of damage.

(j) *Painting These Shingles.*—Estimated cost is \$300.00, making a total of \$4,500.00 for this improvement.

(k) *New Irrigation System.*—For the farm, as per engineers' estimate, these engineers being employed by the State of Washington Public Highway Commission. This engineering project will help to irrigate 23 acres already under irrigation, as well as 96 additional acres which have not been cleared. By making a few alterations the same scheme will irrigate 66 additional acres. In other words, it will eventually bring under water 162 acres at present unwatered. A great deal of the 66 acres mentioned in the engineers' report, dated February 13, 1915, has already been cleared and can immediately be put under water as soon as this project is allowed.

(n) *Repairs and Improvements for Four Cottages.*—These cottages were originally constructed about 1845. It was our intention to ask the Board of Control for two new officers' cottages. These two cottages were to be built on the United States army barracks style. Each cottage would accommodate two officers and families. We estimated the cost of each cottage at \$4,500.00. However, the budget was getting so large we decided to make our old cottages do, and feel the amount of \$1,500.00 to repair same can tide us over for another two years and is a very modest estimate. An allowance of one cottage would be especially desirable, and if the scheme were adopted of providing one new cottage every two years, in eight years we would have these old worn-out structures replaced with modern buildings.

2. *Unitemized.*—Miscellaneous general repairs and improvements of the present buildings, machinery and equipment to cover items not itemizable and not customary maintenance charges; \$10,000.00 is requested for this purpose.

If the amount of building and repairs requested is to be done during the coming biennium, the number of items which we cannot foresee will be considerable and a great many adjustments will have to be made. For instance, in moving out of center the power house, which

is a veritable fire menace, and the laundry, the carpenter shop and the tin shop, this room will be utilized by making it over into a temporary central dining room and industrial room. The expense will consist of laying new floors and possibly some new equipment for this purpose. Among the miscellaneous general repairs and improvements charged in the last two years, we might mention hydrants, all sorts of plumbing materials, electrical equipment, roofing, valves, screens, steam-fitting appliances, locks, hardware of all kinds, repairs to engines and boilers, belting, awnings, leather, lime and cement in large quantities, paints and oils, glass, bolts, nails and wire, pipe of different kinds, lumber, shingles, gaskets, sand, gravel, plaster, brick, tile and fire brick, repairs to hydrotherapy, fences of different kinds (wire, poultry, hog fences, etc.), wall paper, architects' and engineers' plans, repairs to scales, iron paint, laths, gutter pipe, etc.

6. *New Buildings:*

1. *Receiving Hospital.*—One receiving hospital and infirmary, two wings and central building and basements, as per architects' plans and estimates, to accommodate 200 patients. This will include four psychopathic wards and two wards on the roof for tubercular and convalescent patients. The estimate for this portion of the new psychopathic hospital is \$168,000.00.

The hospital at Fort Steilacoom was never complete as an entity. Receiving wards and hospital wards were never built for such purposes, but some of the ordinary wards have been utilized in the past and it has always been the hope that at some time, proper receiving wards and hospital wards would be erected. This want is imperative at the present time, and if we are to keep pace with the modern treatment of the insane, it is essential. These buildings are erected in other states south of us—Oregon, where well-equipped receiving hospitals have been built, and to the north of us, in British Columbia, where fine receiving hospitals have been erected. Whatever can be done in the way of treatment to relieve and cure the insane is accomplished best in these buildings.

The present plans consist of four wings, a total estimated cost of \$280,000.00, taking care of, when finally completed, 400 patients. We are asking that two wings and a central building be allowed at the present time.

2. *Detached Power House.*—Including removal of the boilers and machinery. This power house will include the tin shop, carpenter shop, plumbing shop, machine shop and generators. The estimated cost for this purpose is \$52,000.00. In taking this matter up with the Board, it had been previously estimated that \$45,000.00 would cover this purpose, but the architects notified us that if we are to have a brick smokestack and a steel frame, up-to-date coal handling plant, \$7,000.00 should be added, or if we will be content with a frame building in place of a reinforced cement structure, a great deal could be deducted, but of course, the fire hazard would be great.

3. *New Laundry Building and Sterilizing Washer.*—The necessity for this building is apparent to anyone who has visited the hospital. It should be built large enough to take care of the present and an increased future population. We desire to have in this new building sterilizing washer and a large sterilizer. The sterilizing washer will cost in the neighborhood of \$2,000.00. We are not asking for the sterilizer at this time, but in erecting the building room will be left so that it can be added at some future time. Local architects have made plans and estimates for this structure. The total cost, including sterilizing washer, is \$20,000.00—\$18,000.00 without the washer. We will place in this building our present laundry equipment, some of which is in excellent condition. As future equipment is installed it will probably be arranged to be operated by electrical power.

4. *Superintendent's Cottage.*—We have made various estimates for this cottage. The Superintendent's cottage should be large. Oft-time the whole Board of Control and the secretary visit the hospital, and we have numerous other state officers at the hospital who are taken care of at the Superintendent's home. Ten thousand dollars is the amount requested for this purpose. The architects have recommended that with \$12,000.00 we would have a complete structure.

7. *Farm:*

1. *One Modern Creamery.*—As per estimate of the Creamery Package Manufacturing Company, of San Francisco, California.

Our present dairy herd produces between 950 and 2,330 pounds of milk a day. At the present time we are arranging to increase the number of our dairy herd by 26 pure-bred cows, and inside of a year the estimate of milk just given will be materially increased. There is no reason why a certain percentage of this milk should not be separated and the butter fat be used for making butter. On a very conservative estimate, we can make at least half of the butter consumed, and if conditions are at all favorable, possibly all of it could be produced on the grounds. From October, 1914, to October, 1915, the total butter bill was \$8,057.24. From October, 1915, to October, 1916, \$7,663.84, an average of \$655.00 per month the past two years. We consume at present 550 pounds weekly or about 80 pounds a day, and in the past two years the price has varied from 25 cents to 35 cents per pound.

In view of the fact that we have at present part of our dairy herd that have reacted to the tuberculin test, it will be necessary to pasteurize the milk from these cows, and a pasteurizer will cost about \$270.00, and the boiler for this milk which will cost \$200.00. These are included in the estimate which has been submitted by the Creamery Package Manufacturing Company. Their estimate totals for creamery machinery equipment \$724.55. A vertical boiler \$200.00 extra, or a total of \$924.55. We feel that for about \$670.00 we can erect a building suitable for our purposes.

The total estimate for the creamery is \$1,600.00.

2. *Two Silos and Equipment.*—One thousand two hundred dollars. That we can raise plenty of corn for these silos has been demonstrated in the past two years.

In making out this budget we have omitted the estimate for remodeling the main hospital building, including the amusement hall or auditorium. Our present auditorium accommodates only 452 and we need one to accommodate at least 900 or 1,000 patients. In rebuilding center, the commissary department, kitchen, bakery and refrigerating plant would be remodeled. A central dining room should be established for a large portion of the patients, which would reduce the per capita cost. The offices in the administration building would be increased in number and enlarged, as those at present are entirely inadequate. Drug store, post office, accounting department with vaults, record rooms, visitors' reception rooms, X-ray department, steward's and physicians' offices were included in this estimate. The architects' estimate for this purpose varied from \$187,000.00 to \$310,000.

We have felt that by removing the power house from center and the laundry, as asked for in this budget, and also removing the carpenter shop, machine shop, tin shop, this space could be temporarily utilized and could be rebuilt by some future appropriation of the legislature.

We have also had estimates made for an automatic telephone system. This amounted to \$7,000.00. Also, a sprinkler fire protection system, the total estimate for the latter being \$28,000.00. These have not been included in this budget, but we hope this can be presented at some future time.

Respectfully submitted,

WM. N. KELLER,
Superintendent.

Table No. 1—Continued.
SHOWING MOVEMENT OF POPULATION BY MONTHS FOR THE YEAR OCTOBER 1, 1915,
TO SEPTEMBER 30, 1916.

Table No. 2.

ADMISSIONS, DISCHARGES AND DEATHS, PER CENT. OF RECOVERIES TO ADMISSIONS, AND PER CENT. OF DEATHS TO WHOLE NUMBER TREATED, FOR EACH YEAR SINCE THE OPENING OF THE HOSPITAL.

Table No. 3.

SHOWING COUNTY RESIDENCE OF PATIENTS ADMITTED DURING THE BIENNIUM ENDING SEPTEMBER 30, 1916.

COUNTIES	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
Chelan		2	2		1	1
Clallam	5	2	7			
Clarke	19	5	24	8	4	12
Cowlitz	7	2	9	7	3	10
Grant				1		1
Grays Harbor	16	5	21	21	9	30
Island	2		2			
Jefferson	5		5			
King	159	95	255	30	25	55
Kitsap	12	4	16		1	1
Kittitas				3	3	6
Lewis	10	7	17	15	11	26
Mason	2		2		1	1
Pacific	2	2	4	4	3	7
Pierce	83	87	120	54	36	90
San Juan	1	1	2			
Skagit	11	7	18			
Skamania	2		2			
Snohomish	29	6	35			
Thurston	9	4	13	10	4	14
Wahkiakum	1	2	3	2		2
Whatcom	14	9	23			
Yakima	4	2	6	12	10	22
Totals.....	395	193	586	167	111	278

Table No. 4.

SHOWING CIVIL CONDITION OF PATIENTS ADMITTED DURING THE TWO YEARS ENDING SEPTEMBER 30, 1916.

CIVIL CONDITION	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
Married	140	137	277	65	69	129
Single	220	40	260	87	81	118
Widowed	20	10	30	7	13	20
Divorced	5	6	11	6	4	10
Unknown	8		8	1		1
Totals.....	395	193	586	167	111	278

Table No. 5.
SHOWING NATIVITY OF PATIENTS ADMITTED.

NATIVITY	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
Native born	195	122	317	89	70	159
Foreign born	185	70	255	74	41	115
Armenia	1		1			
Australia						
Austria	9	2	11	4	1	5
Austria-Hungary				1		1
Belgium					1	1
Bulgaria	1		1			
Canada	12	12	24	10	7	17
China	8		3			
Denmark	5	1	6	3		3
England	15	6	21	2	4	6
Finland	17	7	24	7	5	12
France	3		3	1	1	2
Germany	15	12	27	16	4	20
Greece	4	1	5	1		1
Holland	1	1	2	1	2	3
Hungary		1	1			
Iceland	1	1	2			
India						
Ireland	8	3	11	1	3	4
Italy	5		5	3	1	4
Japan	2		2	2		2
Montenegro				1		1
Norway	25	9	34	4	5	9
Nova Scotia	2	1	3			
Poland	1		1	1		1
Portugal	1		1			
Prussia	1		1			
Roumania	1		1			
Russia	8	1	9	1		1
Scotland	2	5	7	1	1	2
Serbia	1		1			
Spain	1		1			
Sweden	35	7	42	11	6	17
Switzerland	5		5	2		2
Turkey				1		1
Unknown	13	1	14	4		4
Totals	383	193	586	167	111	278

Table No. 6.
TABLE SHOWING NATIVITY OF PARENTS OF PATIENTS ADMITTED AS COMPARED WITH CENSUS OF
1910, STATE OF WASHINGTON.

	Year Ending September 30, 1916		Year Ending September 30, 1916			Percentage to Whole Number of Admissions	Percentage of Whole Admissions for Biennium Ending September 30, 1916	Percentage Total Population of State of Washington Represented by Each Nativity or Parentage Group as of Census 1910
	Male		Percentage Whole Number of Admissions	Male	Female	Total		
Native born of native parentage.....	167		46.41	59	50	109	44.09	52.5
Native born of foreign or mixed parentage....	25		7.67	30	20	50	10.98	25.5
Foreign born of foreign parentage.....	155		49.51	74	41	115	42.82	21.7
Nativity unknown ..	13		2.39	4	-	4	2.08	.....
Totals.....	360			167	111	278		

Table No. 7.
SHOWING OCCUPATIONS PRIOR TO ADMISSION OF PATIENTS
ADMITTED.

OCCUPATIONS	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
I. AGRICULTURAL AND RURAL.....	41	.....	41	27	.....	27
Clearing land	1	.....	1	.....	.....	.....
Dairyman	2	.....	2	.....	.....	.....
Farmer	37	.....	37	25	.....	25
Florist .....	.....	.....	.....	.....	.....	.....
Gardener	1	.....	1	2	.....	2
II. COMMERCIAL AND MEROANTILE..	22	5	27	12	2	14
Agent, insurance .....	.....	.....	.....	2	.....	2
Agent, real estate	4	.....	4	3	.....	3
Brewer .....	.....	.....	.....	1	.....	1
Broker	1	.....	1	.....	.....	.....
Butcher	1	.....	1	1	.....	1
Buttermaker	1	.....	1	.....	.....	.....
Clerk	2	4	6	2	1	3
Collector	1	.....	1	.....	.....	.....
Fish packer	1	.....	1	.....	.....	.....
Groceryman	2	.....	2	.....	.....	.....
Merchant	3	.....	3	1	.....	1
Salesman .....	.....	.....	.....	2	1	3
Salesman, clothing	2	.....	2	.....	.....	.....
Salesman, traveling	2	.....	2	.....	.....	.....
Saloonkeeper	2	.....	2	.....	.....	.....
Solicitor .....	.....	1	1	.....	.....	.....
III. MANUFACTURING AND	85	1	86	41	2	43
MECHANICAL	24	.....	24	11	.....	11
1. Building Trades .....	.....	.....	.....	.....	.....	.....
Basket maker	1	.....	1	.....	.....	.....
Bridge builder	1	.....	1	.....	.....	.....
Cabinet maker	1	.....	1	.....	.....	.....
Carpenter	13	.....	13	7	.....	7
Contractor	2	.....	2	1	.....	1
Mason	1	.....	1	.....	.....	.....
Painter	2	.....	2	1	.....	1
Pile driver	1	.....	1	1	.....	1
Plumber	1	.....	1	.....	.....	.....
Ship builder .....	.....	.....	.....	1	.....	1
Stone mason	1	.....	1	.....	.....	.....
2. Mining	6	.....	6	4	.....	4
Miner	6	.....	6	4	.....	4
3. Food Products	9	1	10	5	2	7
Baker	2	.....	2	3	.....	3
Confectioner	1	.....	1	.....	.....	.....
Cook	6	1	7	2	2	4
4. Iron and Steel Workers.....	8	.....	8	6	.....	6
Boilermaker .....	.....	.....	.....	1	.....	1
Blacksmith	2	.....	2	1	.....	1
Machinist	5	.....	5	2	.....	2
Moulder .....	.....	.....	.....	2	.....	2
Steamfitter	1	.....	1	.....	.....	.....
5. Leather	1	.....	1	.....	.....	.....
Shoemaker	1	.....	1	.....	.....	.....
6. Lumber and Its Remanufacture..	29	.....	29	13	.....	13
Shingle weaver	4	.....	4	.....	.....	.....
Woodman	25	.....	25	13	.....	13
7. Metals Other Than Iron.....	1	.....	1	.....	.....	.....
8. Paper and Printing.....	.....	.....	.....	1	.....	1
Printer .....	.....	.....	.....	1	.....	1

Table No. 7—Continued.

SHOWING OCCUPATIONS PRIOR TO ADMISSION OF PATIENTS ADMITTED.

OCCUPATIONS	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
III. MANUFACTURING AND MECHANICAL—Continued:						
9. Textiles	3		3			
Tailor	3		3			
10. Miscellaneous	4		4	1		1
Cigar maker	1		1	1		1
Engineer, gas	1		1			
Engineer, stationary	1		1			
Upholsterer	1		1			
IV. COMMUNICATION AND TRANSPORTATION						
1. Telegraph and Telephone...	23		23	1		1
2. Steam Railroads	9		9	2		2
Brakeman	3		3	1		1
Engineer	3		3			
Fireman	2		2			
Switchman	1		1			
Porter				1		1
3. Other Occupations	11		11	6		6
Driver laundry wagon	1		1			
Fireman, marine	1		1	1		1
Freight handler				1		1
Newsboy	1		1			
Jitney driver				1		1
Officer on steamboat	1		1			
Route agent, express company				1		1
Shipping clerk	1		1			
Teamster	6		6	2		2
V. PROFESSIONAL						
Artist, landscape	15	12	27	3	3	6
Attorney	1		1	1		1
College professor	1		1			
Druggist	3		3			
Journalist		1	1			
Justice of peace	1		1			
Missionary		1	1			
Musician	1		1	1		1
Newspaperman	2		2			
Nurse	1	3	4			
Physician	1		1			
Spiritualist		1	1			
Student	1	1	2	1	1	2
Taxidermist	1		1			
Teacher	1	5	6		2	2
VI. CLERICAL						
Accountant, expert	6	3	9	3	2	5
Bookkeeper	1		1			
Bookkeeper	4	1	5	2	1	3
Clerk	1	1	2			
Librarian					1	1
Stenographer		1	1			

Table No. 7—Continued.

SHOWING OCCUPATIONS PRIOR TO ADMISSION OF PATIENTS
ADMITTED.

OCCUPATIONS	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
VII. DOMESTIC AND PERSONAL.....	15	152	167	1	92	93
Barber	7	.....	7	.....	.....	.....
Dishwasher	1	.....	1	.....	.....	.....
Domestics .....	.....	22	22	.....	18	18
Furnace tender	1	.....	1	.....	.....	.....
Dyer	1	.....	1	.....	.....	.....
Janitor	1	.....	1	.....	.....	.....
Houswives .....	.....	122	122	.....	70	70
Laundress .....	.....	1	1	.....	3	3
Seamstress .....	.....	5	5	.....	1	1
Shoeshiner .....	.....	.....	.....	1	.....	1
Waiter or waitress	4	2	6	.....	.....	.....
VIII. MISCELLANEOUS	168	.....	168	62	.....	62
Cowboy .....	.....	.....	.....	1	.....	1
Deck hand .....	.....	.....	.....	1	.....	1
Fisherman	1	.....	1	2	.....	2
Guard	1	.....	1	.....	.....	.....
Laborer	158	.....	158	54	.....	54
Longshoreman	2	.....	2	.....	.....	.....
Night watchman	1	.....	1	.....	.....	.....
Sailor	5	.....	5	4	.....	4
Section foreman	1	.....	1	.....	.....	.....
Ship fitter	1	.....	1	.....	.....	.....
Soldier	2	.....	2	.....	.....	.....
Stevedore	1	.....	1	.....	.....	.....
IX. NO OCCUPATION	11	20	31	10	10	20
X. UNKNOWN	7	.....	7	.....	.....	.....
Totals.....	398	198	596	167	111	278

Table No. 8.
SHOWING ASSIGNED CAUSES OF INSANITY OF PATIENTS
ADMITTED.

CAUSES	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
I. CONGENITAL:						
Congenital	6	1	7	.....	2	2
Defective development	3	1	4	1	.....	1
Heredity	19	13	32	7	15	22
II. DISEASES:						
1. General Diseases:						
a. Epidemic:						
Measles	1	.....	1	.....	.....	.....
Typhoid fever	2	1	3	.....	1	1
b. Other General:						
Sanity	19	8	27	6	5	11
Severe headaches .....	.....	.....	.....	.....	1	1
2. Diseases of the Nervous System and Organs of Special Sense:						
Apoplexy	1	.....	1	.....	2	2
Brain tumor .....	.....	.....	.....	.....	1	1
Cerebral hemorrhage	1	.....	1	1	1	2
Epilepsy	4	7	11	4	8	12
Paralysis	1	1	2	.....	.....	.....
Paresis	1	.....	1	.....	.....	.....
Unstable nervous system .....	.....	.....	.....	.....	1	1
Softening of the brain .....	.....	.....	.....	.....	1	1
3. Diseases of the Circulatory System.						
Arteriosclerosis	4	1	5	.....	.....	.....
Heart trouble .....	.....	.....	.....	.....	1	1
4. Diseases of the Respiratory System:						
Tuberculosis, pulmonary .....	.....	.....	.....	3	.....	3
5. Diseases of the Digestive System:						
Intestinal trouble .....	.....	.....	.....	.....	1	1
6. Diseases of the Genito-Urinary System:						
a. Male Organs:						
Venereal disease	29	.....	29	14	.....	14
b. Femal Organs:						
Menopause .....	.....	7	7	.....	4	4
Menstrual difficulty .....	.....	1	1	.....	1	1
Ovary trouble .....	.....	1	1	.....	.....	.....
Pelvic organs, disorder of .....	.....	2	2	.....	.....	.....
Venereal disease .....	.....	3	3	.....	4	4
7. Puerperal Condition:						
Childbirth .....	.....	10	10	.....	2	2
Pregnancy .....	.....	5	5	.....	2	2
Puerperal .....	.....	4	4	.....	4	4
8. Ill-Defined Diseases:						
Ear trouble .....	.....	1	1	.....	.....	.....
Ill health	2	2	4	.....	1	1
III. EXTERNAL CAUSES:						
Accident .....	.....	1	1	.....	.....	.....
Confinement in jail	1	.....	1	.....	.....	.....
Exposure	1	.....	1	.....	.....	.....
Fall .....	.....	.....	.....	2	.....	2
Gas poison	1	.....	1	.....	.....	.....
Hypnotism	1	.....	1	.....	.....	.....
Injury	5	.....	5	2	.....	2
Injury to head	8	3	11	5	.....	5
Lack of employment	4	1	5	.....	.....	.....
Lack of nourishment	1	1	2	.....	.....	.....
Loss of limb	1	.....	1	.....	.....	.....
Loss of sight and hearing	1	.....	1	.....	.....	.....

Table No. 8—Continued.
SHOWING ASSIGNED CAUSES OF INSANITY OF PATIENTS
ADMITTED.

CAUSES	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
III. EXTERNAL CAUSES—Continued:						
Operation, surgical	1		1	1	1	2
Overstudy	1		1			
Overwork	5	4	9	2	1	3
Solitude	1	1	2	3		3
Starvation		1	1			
Strychnine poison	1		1			
Sunstroke	2		2			
IV. EMOTIONAL:						
Business difficulties	1		1	1		1
Depression				1		1
Disappointment		1	1			
Domestic troubles	3	1	4		3	3
Financial difficulties	3	2	5	2	1	3
Grief	4	3	7		4	4
Love affair				1		1
Religious excitement	6	4	10	1	1	2
Shock	1		1			
Spiritualism	1		1			
Worry	2	6	8	8	2	10
V. MORAL:						
1. Use of Drugs and Alcoholics:						
Alcohol	39	8	47	16	3	19
Drug habit	4	4	8			
2. Sexual Perversion:						
Immoral living		2	2			
Masturbation	2		2	5		5
Sexual perversion	2		2	1		1
VI. UNKNOWN	197	81	278	77	42	119
Totals	396	798	596	167	111	278

Table No. 9.

SHOWING FORMS OF MENTAL DISEASES OF PATIENTS ADMITTED DURING THE BIENNIUM ENDING SEPT. 30, 1916.

MENTAL DISEASE	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
I. INFECTION PSYCHOSES:						
a. Fever delirium						
b. Infection delirium						
c. Post-infection delirium						
II. EXHAUSTION PSYCHOSES:						
a. Collapse delirium	1		1			
b. Acute confusional insanity (dementia)		1	1			
c. Acquired neurasthenia (chronic nervous exhaustion)		1	1		2	2
III. INTOXICATION PSYCHOSES:						
a. Alcoholism:						
Acute alcoholic intoxication						
Chronic alcoholism	5	1	6			
Delirium tremens						
Korsakow's psychosis						
Acute alcoholic hallucinosis	27	6	33	8	2	10
Alcoholic hallucinatory dementia	6		6			
Alcoholic paranoia	1		1			
Alcoholic paresis						
Alcoholic pseudoparesis						
b. Morphinism	7	1	8		1	1
c. Cocainism				1		1
d. Heroinism	1		1			
IV. THYROIDIGENOUS PSYCHOSES:						
a. Myxoedematous insanity		1	1			
b. Oretinism		1	1			
c. Exophthalmic						
V. DEMENTIA PRAECOX:						
Hebephrenic form	109	46	155	21	13	34
Catatonic form	23	12	35	10	2	12
Paranoid form	11	22	33	15	10	25
VI. DEMENTIA PARALYTICA	27	3	40	16	8	24
VII. ORGANIC DEMENTIAS:						
Huntington's chorea						
Multiple sclerosis						
Cerebral syphilis	5	2	7	2	1	3
Tabetic psychosis	1		1			
Arteriosclerotic insanity	8	4	12	3	1	4
Cerebral tumor						
Brain abscess						
Cerebral apoplexy	13	2	15	4	1	5
Cerebral trauma	3		3	3		3
VIII. INVOLUTION PSYCHOSES:						
a. Melancholia	7	6	13	7	1	8
b. Pre-senile delusional insanity ..	4		4			
c. Senile dementia	51	18	69	19	15	34

Table No. 9—Continued.

**SHOWING FORMS OF MENTAL DISEASES OF PATIENTS AD-
MITTED DURING THE BIENNIUM ENDING SEPT. 30, 1916.**

MENTAL DISEASE	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
IX. MANIC-DEPRESSIVE INSANITY:						
Manic states	23	21	44	25	26	51
Depressive states	32	28	60	19	14	33
Mixed states	3		3	2	1	3
X. PARANOIA		3	3	1		1
XI. EPILEPTIC INSANITY	11	7	18	7	4	11
XII. THE PSYCHOGENIC NEUROSES:						
a. Hysterical insanity		2	2		1	1
b. Traumatic neurosis						
c. Dread neurosis						
XIII. CONSTITUTIONAL INFERIORITY:	1	3	4	2	3	5
XIV. DEFECTIVE MENTAL DEVELOPMENT:						
Imbecility	3	2	5	1		1
XV. NOT INSANE				1		1
Totals.....	308	193	506	167	111	278

Table No. 10.

Comparative Statement Showing the Number of Patients (Male and Female) Admitted to the Western State Hospital at Fort Steilacoom, Washington, Whose Forms of Mental Diagnoses Were Those of the Alcoholic Types of Intoxication Psychoses, and the Number Admitted Addicted to the Use of Drugs, Commencing with January 1, 1912, to and including September 30, 1916. (Sub-Table "A" Shows the Months in Which the Alcoholic Cases Were Admitted for the Year 1916 to Date, and Sub-Table "B" Shows the Months in Which the Drug Cases Were Admitted for the Year 1916 to Date, With a View of Showing the Decrease in Admissions Due to the Operation of the Dry Law and the Harrison Anti-Narcotic Act.)

INTOXICATION PSYCHOSES	1912			1913			1914			1915			1916		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Chronic alcoholism	5	1	6	6	...	6	8	2	10	5	1	6	...	...	...
Delirium tremens	2	...	2	3	...	3	...	...	...	...	...	...	...	...	...
Acute alcoholic hallucinosis...	31	2	33	38	5	43	23	5	28	26	5	31	4	1	5
Alcoholic hallucinatory dementia	7	...	7	...	...	...	1	...	1	6	...	6	...	...	...
Alcoholic paranoia .....	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...
Alcoholic pseudoparesis ..	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...
Totals.....	45	3	48	47	5	52	33	7	40	33	6	44	4	1	5
Morphinism	3	2	5	1	4	5	4	1	5	4	...	4	...	1	1
Morphinism and cocaineism...	...	...	...	...	...	...	3	...	3	...	...	...	...	...	...
Cocaineism .....	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...
Heroinism .....	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...
Totals.....	3	2	5	1	4	5	6	1	7	6	...	6	...	1	1
Grand totals.....	48	5	53	48	9	57	39	8	47	44	6	50	4	2	6

SUB-TABLE "A."

MONTH	Male	Female	Total
January, 1916	2	1	3
March, 1916	1	...	1
August, 1916	1	...	1
Totals.....	4	1	5

SUB-TABLE "B."

MONTH	Male	Female	Total
March, 1916	1	1
Totals.....	...	1	1

Table No. 11.
SHOWING AGES ON ADMISSION OF PATIENTS ADMITTED.

AGES	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
Under 15 years.....				2		2
15 and under 20 years.....	10	2	12	5		5
20 and under 25 years.....	29	21	46	15	17	32
25 and under 30 years.....	41	29	70	13	8	21
30 and under 35 years.....	61	23	84	24	18	42
35 and under 40 years.....	58	25	83	28	12	40
40 and under 45 years.....	47	29	75	20	12	32
45 and under 50 years.....	31	19	50	13	12	25
50 and under 55 years.....	30	17	47	8	10	18
55 and under 60 years.....	28	8	36	11	6	17
60 and under 65 years.....	23	3	26	13	6	19
65 and under 70 years.....	12	6	18	6	2	8
70 and under 75 years.....	13	3	16	5	3	8
75 and under 80 years.....	7	5	12	2	3	5
80 and under 85 years.....	2	2	4	1	1	2
85 and under 90 years.....	3	2	5		1	1
Age unknown.....	2		2	1		1
Totals.....	308	193	506	167	111	278

Table No. 12.
NUMBER OF TIMES PATIENTS WERE ADMITTED.

TIMES ADMITTED	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
Once.....	346	171	517	155	99	254
Twice.....	36	19	55	10	12	22
Three times.....	8	3	11	2		2
Four times.....	1		1			
Five times.....	2		2			
Totals.....	393	193	586	167	111	278

State Board of Control

Table No. 13.
SHOWING EDUCATION OF PATIENTS ADMITTED,

EDUCATION OF PATIENTS	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
Common school	357	103	460	153	97	250
High school	12	17	29	5	10	15
College	5	1	6	4	.....	4
Technical .....	.....	.....	.....	.....	2	2
State school	1	1	2	.....	.....	.....
Normal school .....	.....	1	1	1	.....	1
University .....	.....	.....	.....	1	.....	1
Outside town	13	7	20	3	2	5
Totals.....	398	196	594	167	111	278

Table No. 14.
RURAL AND URBAN DISTRIBUTION OF PATIENTS ADMITTED
DURING THE BIENNIUM ENDING SEPTEMBER 30, 1916.

RESIDENT IN	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
Villages and towns of less than 2,000 population	68	34	102	62	35	97
Towns of 2,000 and under 4,000.....	25	11	36	7	5	12
Towns of 4,000 and under 8,000.....	16	11	27	10	11	21
Towns of 8,000 and under 25,000.....	54	11	65	25	13	38
County of Tacoma, population 102,500.....	72	23	95	42	25	67
County of Seattle, population 330,000.....	159	98	257	24	22	46
Residence unknown	9	.....	9	7	.....	7
Totals.....	398	196	594	167	111	278

I. Cities of 4,000 and Under 8,000.

RESIDENT IN	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
Anacortes		1	1			
Omtralia	1	4	5		3	3
Ochalla	6	1	7	2	3	5
Ellensburg				1	1	2
Olympia	7	4	11	6	1	7
Port Townsend	1		1			
Puyallup	1	1	2	1	2	3
Wenatchee					1	1
Totals.....	16	11	27	10	11	21

II. Cities of 8,000 and Under 25,000.

RESIDENT IN	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
Aberdeen	4	1	5	8	3	11
Bellingham	8	5	13			
Everett	18	3	21			
Hoquiam	4		4	4	4	8
North Yakima	3	1	4	8	3	11
Vancouver	17	1	18	5	3	8
Totals.....	54	11	65	25	13	38

**SHOWING FORMS OF MENTAL DISEASES OF PATIENTS DISCHARGED DURING THE BIENNIUM ENDING
SEPTEMBER 30, 1916.**

MENTAL DISEASES	Year Ending September 30, 1915						Year Ending September 30, 1916																		
	Recovered			Improved			Unimproved			Not Insane			Recovered			Improved			Unimproved			Not Insane			
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	
Infection Phychoses:																									
Fever delirium																									
Infection delirium																									
Post-infection delirium																									
Insanity (amentia)	1	1																							
Insania (chronic nervous exhaustion)	1	1																							
Intoxication Phychoses:																									
Alcoholism—																									
Acute alcoholic intoxication																									
Chronic alcoholism																									
Delirium tremens																									
Korsakow's psychosis																									
Acute alcoholic hallucinosis	14	3	17																						
Alcoholic hallucinatory dementia																									
Alcoholic paranoia																									
Alcoholic paresis																									
Alcoholic pseudoparesis																									
Morphinism	3	1	4	1																					
Cocainism																									
Heroinism																									
Forward	17	6	23	1																					

Table No. 15--Continued.

SHOWING FORMS OF MENTAL DISEASES OF PATIENTS DISCHARGED DURING THE BIENNIUM ENDING
SEPTEMBER 30, 1916.

MENTAL DISEASES	Year Ending September 30, 1915												Year Ending September 30, 1916											
	Recovered			Improved			Unimproved			Not Insane			Recovered			Improved			Unimproved			Not Insane		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Brought forward	36	10	46	31	13	49	3		3				35	13	63	49	21	70	19		10			
Manic Depressive Insanity.																								
Manic states	7	9	16	2	2	4							6	8	14	2		2		2				
Depressive states	6	10	16	2	3	5							7	15	22	6	4	10						
Mixed states													1		1									
Paranoia																	1	1						
Epileptic insanity				1	3	4										1	1	2						
The Psychogenic Neuroses:																								
Hysterical insanity																	1	1						
Traumatic neurosis																								
Dread neurosis																								
Constitutional inferiority					1	1											1	1		1				
Defective Mental Development:																								
Imbecility																								
Not Insane																								
Totals	49	29	116	36	27	68	3		3				40	30	86	53	29	87	13		13		1	1

Table No. 16.

**DURATION OF RESIDENCE IN HOSPITAL OF THOSE RECOVERED
DURING THE BIENNIUM ENDING SEPTEMBER 30, 1916.**

DURATION OF RESIDENCE	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
to 30 days.....	1	1	2			
to 30 days.....	1	1	2	2	1	3
to 3 months.....	6	4	10	15	2	17
to 3 months.....	12	6	18	7	5	12
to 4 months.....	8	4	12	3	7	10
to 6 months.....	6	4	10	5	6	11
to 9 months.....	7	5	12	6	4	10
to 12 months.....	8	2	10	3	4	7
to 2 years.....	2	1	3	6	5	11
to 3 years.....	1	1	2	1		1
to 4 years.....	2		2		1	1
to 5 years.....					1	1
to 10 years.....				1		1
Totals.....	49	29	78	49	30	79

Table No. 17.

Table Showing the Number of Patients Admitted to the Western State Hospital, Fort Steilacoom, Washington, During the Fiscal Years Commencing With October 1, 1906, and Ending September 30, 1916, Showing the Number and Percentage of These Patients Who on September 30, 1916, Had Been Discharged as "Recovered"; Also Showing the Total Number of Discharges Among the Entire Patient Population As of Each Fiscal Year Since October 1, 1906, With Percentage of Recoveries Based on Number of Discharges; Also Daily Average Patient Population Present in Hospital.

FOR YEAR ENDING	Number of Admissions for Each Fiscal Year Since Oct. 1, 1906	Number of Patients from Each Year's Admissions Discharged As "Recovered" Up to and Including September 30, 1916	Percentage of Patients Discharged as "Recovered" from Each Year's Admissions Up to and Including September 30, 1916	Number of Patients Among the Entire Patient Population Discharged As of the End of Each Fiscal Year Since October 1, 1906	Number of Patients Among the Entire Patient Population Discharged As "Recovered" As of the End of Each Fiscal Year Since October 1, 1906	Percentage of Recoveries to Discharges	Daily Average Patient Population
September 30, 1907.....	490	148	30.23	228	228	80.25	997.44
September 30, 1908.....	538	199	36.98	283	283	70.81	1,112.44
September 30, 1909.....	564	189	33.53	277	277	63.17	1,242.49
September 30, 1910.....	598	174	29.09	339	339	58.34	1,332.91
September 30, 1911.....	576	167	28.99	329	329	51.97	1,370.47
September 30, 1912.....	613	164	26.73	359	359	50.16	1,391.53
September 30, 1913.....	921	184	20.03	409	409	43.75	1,377.08
September 30, 1914.....	641	185	28.86	352	352	60.22	1,417.83
September 30, 1915.....	388	90	15.35	169	169	40.05	1,399.50
September 30, 1916.....	278	14	5.03	211	211	40.25	1,354.86

Table No. 18.

CAUSES OF DEATHS OF PATIENTS.

CAUSE OF DEATH	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
GENERAL DISEASES:						
Carcinoma of breast.....					1	1
Carcinoma of lip.....				2		2
Carcinoma of pylorus.....	1		1			
Carcinoma of rectum.....				1		1
Carcinoma of stomach.....				1		1
Erysipelas, facial.....				1		1
Influenza.....				3	2	5
Purulent nasitis.....					1	1
Septicæmia following traumatic abrasion of arm.....	1		1			
Septicæmia from infected hip.....					1	1
Tuberculosis, pulmonary.....	7	4	11	10	1	11
Tuberculosis, pulmonary (hemorrhage).....	1		1	1		1
Tubercular laryngitis.....	1		1			
Tubercular peritonitis.....	1		1			
DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE:						
Exhaustion psychoses, collapse delirium.....	1		1			
Intoxication psychoses, chronic morphinism.....	1		1			
Intoxication psychoses, chronic cocainism.....				1		1
Dementia præcox, catatonic form, with exhaustion.....	1	2	3	1		1
Dementia præcox, hebephrenic form, with exhaustion.....	3		3			
General paralysis of the insane....	23	3	26	22	2	24
Organic dementia, Huntington's chorea.....	1		1			
Cerebral apoplexy.....	25	4	29	8	8	16
Cerebrospinal syphilis.....	3	1	4			
Melancholia with exhaustion.....				1		1
Senile dementia with exhaustion....	23	3	26	10	1	11
Manic depressive insanity, manic state, with exhaustion.....	10		10	1	1	2
Status epilepticus.....	1	3	4	6		6
Manic depressive insanity, de- pressed state, with exhaustion....	2		2			
DISEASES OF THE CIRCULATORY SYSTEM:						
Coronary insufficiency with broken compensation.....					3	3
Aortic sclerosis.....	2	1	3		1	1
Atheroma.....				1		1
Acute dilation of the heart.....		1	1			
Endocarditis, chronic.....				1		1
Fatty degeneration of the heart....					1	1
Mitral insufficiency with broken compensation.....	2	1	3	1	3	4
Myocarditis.....	1		1			
Myocarditis, acute.....				4		4
Myocarditis, chronic.....		1	1	2		2
Pulmonary embolism.....	1		1			
Ruptured aneurism of the ascend- ing aorta.....				1		1

Table No. 18—Continued.
CAUSES OF DEATHS OF PATIENTS.

CAUSE OF DEATH	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
IV. DISEASES OF THE RESPIRATORY SYSTEM:						
Asthma					1	1
Bronchitis, acute					2	2
Pneumonia, broncho	2		2		2	2
Pneumonia, hypostatic					1	1
Pneumonia, lobar				3	1	4
Pneumonia, lobular, probably septic				1		1
V. DISEASES OF THE DIGESTIVE SYSTEM:						
Cirrhosis of the liver				1		1
Enteritis, acute, with diarrhea		1	1		2	2
Enteritis, chronic	1		1			
Gastro-enteritis, acute, from overloading stomach					1	1
Peritonitis, general, following strangulated hernia				1		1
Strangulation of intestine					1	1
VI. DISEASES OF THE GENITO- URINARY SYSTEM:						
Nephritis, acute (following trauma)	1		1			
Nephritis, chronic	2		2	1		1
Nephritis, chronic interstitial	1		1	3	4	7
Nephritis, chronic parenchymatous	3	6	9		1	1
VII. AFFECTIONS PRODUCED BY EXTERNAL CAUSES:						
Accidental fall					1	1
Drowning (accidental)	1		1			
Drowning (suicidal)	1		1			
Drowning (probably suicidal)	1		1			
Strangulation (suicide)	1		1			
Strangulation (choked while eating)	1		1			
Strangulation, hanging (suicide)	4		4	1		1
Strangulation (accidental)	1		1			
VIII. UNKNOWN (Died on parole and escape)						
	3	1	4	3	1	4
Totals	139	32	170	92	45	137

Table No. 19.

SHOWING AGES OF PATIENTS WHO DIED DURING THE BIENNIIUM ENDING SEPTEMBER 30, 1916.

AGES OF PATIENTS	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
under 20 years.....	2	1	3	1	.....	1
under 25 years.....	2	1	3	1	.....	1
under 30 years.....	9	3	12	5	.....	5
under 35 years.....	14	5	19	12	4	16
under 40 years.....	12	3	16	11	3	14
under 45 years.....	16	1	17	7	5	12
under 50 years.....	9	2	11	7	3	10
under 55 years.....	15	2	17	9	3	12
under 60 years.....	12	1	13	5	4	9
under 65 years.....	9	1	10	8	2	10
under 70 years.....	10	2	12	9	4	13
under 75 years.....	7	1	8	3	4	7
under 80 years.....	7	4	11	5	4	9
under 85 years.....	4	4	8	2	1	3
under 90 years.....	3	.....	3	1	2	3
under 95 years.....	1	.....	1	1	.....	1
unknown.....	5	.....	5	.....	1	1
Totals.....	123	32	155	92	45	137
per age.....	50.7	51.7	50.9	51.2	56.2	52.6

Table No. 20.

SHOWING DURATION OF MENTAL DISEASE OF PATIENTS WHO DIED DURING THE BIENNIIUM ENDING SEPTEMBER 30, 1916.

DURATION OF DISEASE	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
1 month.....	27	3	30	4	6	10
2 months.....	10	3	13	6	2	8
3 months.....	17	3	20	8	5	13
4 months.....	10	3	13	3	4	7
5 months.....	12	12	4	3	7
6 months.....	7	7	10	3	13
7 months.....	12	5	17	12	1	13
8 months.....	8	2	10	4	3	7
9 months.....	9	1	10	14	4	18
10 months.....	4	3	7	3	2	5
11 months.....	4	2	6	5	3	8
12 months.....	1	1	2	4	4	8
13 months.....	2	1	3	2	3	5
14 months.....	1	1	1	1
15 months.....	2	2	4	1	5
16 months.....
17 months.....
18 months.....
19 months.....
20 months.....
21 months.....
22 months.....
23 months.....
24 months.....
25 months.....
26 months.....
27 months.....
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84 months.....
85 months.....
86 months.....
87 months.....
88 months.....
89 months.....
90 months.....
91 months.....
92 months.....
93 months.....
94 months.....
95 months.....
96 months.....
97 months.....
98 months.....
99 months.....
100 months.....
Totals.....	123	32	155	92	45	137

Table No. 21.
SHOWING MOVEMENT OF PAROLED PATIENTS.

MOVEMENT OF PATIENTS	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
On parole October 1st.....	28	23	55	61	57	118
Paroled	95	90	194	80	87	167
Totals.....	118	132	250	141	144	286
Discharged, while paroled:						
Recovered	6	24	30	30	36	66
Improved	19	23	42	28	25	53
Unimproved	5	.....	5	.....	.....	.....
Died, while paroled.....	3	1	4	2	1	3
Transferred to other state hospitals, while paroled .....	.....	1	1	1	1	2
Totals.....	33	49	82	59	63	122
Returned from parole.....	24	26	50	28	25	53
Remaining on parole September 30th.....	61	57	118	54	56	110

Table No. 22.
SUMMARY.

	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
Patients present, on parole and on es- cape October 1st.....	964	567	1,531	919	617	1,536
Admitted	308	198	506	167	111	278
Total number of patients in hospital during term	1,272	765	2,037	1,086	728	1,814
Patients discharged—Recovered	49	29	78	49	36	85
Patients discharged—Improved	36	27	63	31	29	60
Patients discharged—Unimproved	8	.....	8	13	.....	13
Patients discharged—Not insane .....	.....	.....	.....	1	.....	1
Patients transferred to Northern State Hospital, Sedro Woolley.....	108	58	221	2	1	3
Patients transferred to Eastern State Hospital, Medical Lake.....	1	.....	1	.....	.....	.....
Patients deported by Federal government.....	8	2	10	9	3	12
Patients deported at state's expense.....	.....	.....	.....	10	1	11
Patients transferred to other states at state's expense .....	.....	.....	.....	2	.....	2
Patients died	83	82	170	92	45	137
Number of vacancies created.....	406	143	549	226	115	341
Number of patients remaining at end of term	919	617	1,536	850	613	1,463

MONTH	1914	1915	1916
October	20	23	24
November	19	23	23
December	19	22	30
1915			
January	20	23	22
February	23	23	30
March	27	22	33
April	29	26	35
May	28	27	34
June	28	28	34
July	28	28	35
August	28	28	35
September	31	28	35
Average year ending Sept. 30, 1915...	26	25	28
1915			
October	31	26	22
November	30	27	30
December	30	28	30
1916			
January	31	28	22
February	31	28	30
March	32	27	33
April	30	27	35
May	28	28	34
June	29	28	34
July	28	28	35
August	28	28	35
September	28	28	35
Average year ending Sept. 30, 1916...	29	28	33
Per Cent. Employed....	20	23	24
Average Population..	909	909	911
Average Employed....	190	190	276
Road.....	1	1	1
Cobbler.....	1	1	1
Tinner.....	1	1	1
Office.....	3	3	3
Cottages.....	3	3	3
Store and Commissary.	3	3	3
Painter... ..	2	2	2
Mason.....	2	2	2
Woods.....	2	2	2
Lawns.....	32	32	32
Laundry.....	11	11	11
Farm and Barns.....	97	97	97
Carpenter.....	6	6	6
Engineer.....	7	7	7
Kitchen.....	23	23	23

Table No. 24.

**REPORT OF MAJOR AND MINOR OPERATIONS PERFORMED AT
THE WESTERN STATE HOSPITAL, FORT STEILACOOM,
WASHINGTON, DURING THE BIENNIUM ENDING SEPTEMBER
30, 1916.**

Amputations:	
Fingers	2
Legs	2
Toes	4
Aspiration of knee joint.....	1
Abscesses Incised:	
Axilla (tubercular)	2
Carbuncles	2
Furuncles	2
Felon	1
Hip joint	1
Middle ear (lanced ear drum).....	1
Psoas (tubercular)	1
Small single abscesses.....	20
Circumcision	4
Curettage	1
Dressing burn on arm.....	1
Evulsion of toe nail.....	3
Excisions:	
Lipoma of chest	1
Massive fibroma of chest.....	1
Eye examinations—by Dr. D. H. Bell of Tacoma, examination muscles, tension, signs, ext. disease, cornea, iris, pupil, lens and fundus (ophthal- moscopic) 104 male and 157 female.....	261
Lumbar punctures for spinal fluid.....	223
Laparotomies:	
Appendectomies (simple)	7
Appendectomies (complicated with abscess).....	2
Gastro-Enterostomy for gastric ulcer.....	1
Intestinal obstruction.....	1
Omental hernia	1
Post-operative adhesions	1
Strangulated hernia (femoral).....	2
Subdiaphragmatic abscess	1
Nephrectomy	1
Osteotomy (tarsal bone).....	1
Removing foreign body from cornea.....	1
Fractures Reduced:	
Colles' fracture	3
Dislocation of middle finger.....	1
Fractured forearm	1
Fracture of leg.....	2
Fracture of neck of humerus.....	1
Poot's fracture.....	1
Suturing:	
Incised wounds	8
Cut throat and trachea	1
Tonsillectomies, complete enucleation.....	21
Wassermann's tests	700
Miscellaneous operations:	
Bunion (Mayo operation).....	3
Carbuncle (complete excision).....	1
Cauterizing carcinoma of nose.....	1
Chronic mastoiditis	2
Epithelioma of face and nose (excision).....	1
Epithelioma of lip (excision).....	1
Hemorrhoids	2
Hydrocele (bottle operation).....	4
Ingrowing toe nails.....	2
Ligation superior thyroid artery (exophthalmic goitre)	1
Thyroidectomy (partial)	
Exophthalmic goitre	3
Simple goitre	0
Varicocoele (radical operation).....	1

Table No. 25.

PATIENTS' FUND.

Covering Period, October 1, 1914, to September 30, 1916.

on hand October 1, 1914.....	\$5,195 19	
.....	8,225 82	
ments		\$3,309 21
on hand September 30, 1916.....		6,182 80
als.....	\$14,491 01	\$14,491 01

DECEASED AND ESCAPED PATIENTS' FUND.

Covering Period, October 1, 1914, to September 30, 1916.

on hand October 1, 1914.....	\$2,295 96	
.....	1,118 95	
ments		\$191 28
on hand September 30, 1916.....		3,224 63
als.....	\$3,415 91	\$3,415 91

UNCLAIMED PATIENTS' FUND.

Covering Period, October 1, 1914, to September 30, 1916.

on hand October 1, 1914.....	\$541 58	
.....	121 15	
on hand September 30, 1916		\$662 73
als.....	\$662 73	\$662 73

AMUSEMENT FUND.

Covering Period, October 1, 1914, to September 30, 1916.

on hand October 1, 1914.....	\$5 32	
.....	1,149 06	
ments		\$1,105 09
on hand September 30, 1916.....		49 26
als.....	\$1,154 35	\$1,154 35

Table No. 26.

MISCELLANEOUS FUND.

During Biennium Ending September 30, 1916.

Date	Received Account or Remitted Account	Received	Disbursed
1914			
Oct. 21	Geo. Harrison, 1 pig.....	\$2 50	
Nov. 2	W. O. Gye, 5 bull calves.....	25 00	
Nov. 6	Bissinger & Co., hides.....	217 00	
	Balance to State Treasurer.....		\$244 50
Dec. 10	48 old barrels.....	15 15	
1915			
Jan. 6	F. Cohen, 9 barrels..... \$3 00		
	F. Cohen, 1, 000 sacks..... 10 00	13 00	
Jan. 28	To State Treasurer.....		15 15
	To State Treasurer.....		13 00
Feb. 1	Mrs. Webb, 1 old barrel.....	25	
Feb. 18	Olaf Holte, 1 old barrel.....	25	
Mar. 4	Balance to State Treasurer.....		50
May 12	Milwaukee Junk Co., 200 pounds scrap tea lead at 2c....	4 00	
	Milwaukee Junk Co., 76 molasses barrels at 40c.....	30 40	
May 20	1 boar pig.....	10 00	
May —	Refund, account industrial insurance rebate, voucher G-72 1914.....	5 07	
June 4	Balance to State Treasurer.....		49 47
June 2	2 gallons gasoline.....	25	
July 9	Balance to State Treasurer.....		25
July 13	Jos. Sladek, 51 beef hides.....	\$370 01	
	Jos. Sladek, 29 calf hides.....	61 78	
	Jos. Sladek, 5 1/2 dozen switches.....	1 65	
	Jos. Sladek, 400 pounds glue stock.....	3 67	
		\$437 11	
July 16	T. Cohen, 3,000 empty sacks.....	120 00	
July 19	T. Cohen, 6,400 empty sacks.....	228 74	
Aug. 2	To State Treasurer.....		437 11
	To State Treasurer.....		348 74
Aug. 8	Jos. Sladek, 10 beef hides, 506 pounds, at 16 1/2c.....		
	Jos. Sladek, 5 calf hides, 91 pounds, at 18 1/2c.....	99 16	
Aug. 12	Wm. Steilke, 1 bull calf (11 days old).....	15 00	
Sept. 7	Balance to State Treasurer.....		114 16
Sept. 25	Jos. Sladek, 8 cow hides.....	49 22	
Sept. 30	T. Cohen, 33 pounds scrap tea lead.....	08	
Oct. 6	Balance to State Treasurer.....		49 80
Oct. 7	V. Lamken, 1,100 sacks at 3c.....	34 80	
Oct. 19	Jos. Sladek, 4 beef hides.....	\$27 06	
	Jos. Sladek, 1 kip hide.....	5 24	
	Jos. Sladek, 1 calf hide.....	2 47	
		42 77	
Nov. 5	Balance to State Treasurer.....		77 57
Nov. 30	Cash received from various relatives and friends of patients for dental work performed On hand November 30, 1915.....	233 07	
Nov. 30	Cash received from employees for shoes repaired—On hand November 30, 1915.....	7 85	
Dec. 10	Balance to State Treasurer.....		240 92

Table No. 26—Continued.

MISCELLANEOUS FUND.

During Biennium Ending September 30, 1916.

Received Account or Remitted Account	Received	Disbursed
Jos. Sladek, 8 beef and calf hides.....	88 40	
Robert A. Allen, for use of surgery (outside emergency operative case).....	10 00	
Balance to State Treasurer.....		98 40
Harry Richlen, junk machinery as follows:		
Laundry machinery	\$90 00	
Pumps	16 00	
Ice machine	15 00	
Old engine	40 00	
Scrap iron	17 85	
Balance to State Treasurer.....	148 85	148 85
Jos. Sladek, 9 beef and calf hides.....	60 00	
L. O. Carlisle, repairs to watchman's clock, vouchered January, 1916, voucher No. A-288.....	4 00	
Balance to State Treasurer.....		64 00
Dental cash receipts (April).....	11 98	
Emergency sale of drugs.....	4 00	
Balance to State Treasurer.....		16 98
Blasinger & Co., 597 pounds beef and calf hides.....	104 25	
Dr. Royal A. Gove, 2 Duroc pigs, 3 Duroc gilts.....	88 48	
Emergency sale of drugs.....	05	
Dental cash receipts (May).....	17 04	
Balance to State Treasurer.....		210 42
Dental cash receipts (June).....	80 80	
Emergency sales from drug room (month of June).....	1 00	
Balance to State Treasurer.....		80 80
Dental cash receipts (July).....	7 81	
Mrs. Marie Scholtens (attendant), fine for escaped patient June 18.....	5 00	
Balance to State Treasurer.....		12 81
Jos. Sladek, 10 beef and calf hides, 906½ pounds at 14c to 28c	58 00	
Mr. Argenbright, cash received to cover mileage used in transferring patient Daisy Argenbright.....	6 20	
Geo. Baldwin (attendant), fine for escaped patient Chas. Williams	5 00	
Dental cash receipts (month of August).....	3 94	
Balance to State Treasurer.....		73 14
K. M. Cook (attendant), fine for escaped patient, Hiram Good	5 00	
John Lesko, cash received to cover cost of materials used in making private chest.....	2 75	
Balance to State Treasurer.....		7 75
Totals.....	\$2,314 75	\$2,314 75

EASTERN STATE HOSPITAL.

To the State Board of Control:

GENTLEMEN: I herewith submit for your consideration, as required by law, the Eighth Biennial Report of the Eastern State Hospital covering the two years beginning October 1, 1914, and ending September 30, 1916.

Changes in Population.—A census of this hospital at the beginning of period covered by this report showed a total population of 1,056, of whom 719 were males and 337 females. There were 176 male and 78 female patients received in the first year. Vacancies were created by 90 discharges, 74 deaths, leaving an actual gain of 90 for the first year.

At the beginning of second year the number of patients was 1,146 and during this year 141 males and 65 females were admitted to the hospital. Vacancies were created by 140 discharges and 70 deaths. This made the total population for the institution at close of biennium 1,142.

By referring to table No. 13 it will be observed that the gains of the population were 110 and 90 in 1914 and 1915, respectively, while in 1916 there was not only no gain, but an actual loss in total population of 4. There are several factors which together account for this result, viz., on July 1st, 1915, the law restricting the state in the matter of commitment of insane went into effect, thereby causing all insane from Yakima and Kittitas counties to be sent to Ft. Steilacoom; also since January, 1916, we have received only four cases of the alcoholic insanities, and we also receive fewer cases from use of narcotic drugs, and finally since July, 1915, the parole law has allowed the release of cases without so much difficulty, which more readily leads to their final discharge.

The recovery rate for the biennium was 31.42 per cent. The death rate was 5.40 per cent.

General and Medical Care.—Every effort has been made to keep the hygiene and sanitation at this hospital up to the highest standard. We have had no outbreaks of contagious diseases, and with the exception of a few cases of erysipelas have not been troubled materially with severe infections. Of course, the aged and feeble are always subject to pneumonia and like diseases during the cold months.

Many major and minor surgical operations were performed for relief of different ailments among the patients. Hydrotherapeutics is used in amenable cases. Current Literature in the medical journals is carefully watched for any new advance in medicinal treatment that may be of benefit to the insane.

The following is a resume of the laboratory work done:

Urinalyses	325
Blood examinations	45
Sputum examinations	46
Pus examinations.....	24
Throat smears	32
Venereal smears	9
Autogenous vaccines	0
Water analyses	20
Gastric analyses	6
Blood cultures	9
Animal inoculations	2
Spinal fluid examinations	25
Wassermann tests	224
Autopsies	29

The general welfare and contentment of the patients have been promoted as much as possible by furnishing much diversified employment, many forms of amusement. A large number of patients were sent, as usual, to the interstate fair at Spokane.

Improvements.—Improvements accomplished during the biennium

Enlarging water system by installing new pump of 35,000 gallons capacity. Building new pump house and laying larger and better intake pipe at Clear Lake.

Installing new 300 horse power boiler with automatic stokers.

Enlarging our system of concrete sidewalks.

Reconstruction of main part of modern greenhouse.

Painting all out buildings and roofs of main buildings.

Preparing grounds for creating amusement park for female patients.

New metal washers installed in laundry.

Increasing efficiency of bakery.

Reconstruction of modern smokehouse for curing hams and bacon.

Reconstruction of improved cow and calf barn.

Extension of telephone and lighting system.

Numerous minor improvements about grounds and buildings.

Farm Operations.—Since acquiring the Peat place, for which a appropriation was made by the last Legislature, our farm operations have increased very materially. We are now cultivating 619 acres compared with 444 the last biennium. In fact this department has become so large that it was found necessary to divide it into two divisions, placing the garden and orchard operations under one head and the general farm under another. By so doing, there is no doubt that we have increased the efficiency of the farm as a whole. With few exceptions, we will produce all the hay, grains, vegetables and fruits used by the institution during the year. To this is to be added the products of the piggery and dairy, which are running at the highest efficiency, producing all the pork, ham, lard, bacon and milk used

by the institution.

The question has been raised and set forth by several reports issued by the Bureau of Inspection and Supervision of Public Offices, as to the probability of making an institution of this kind not only self-supporting but also return a revenue to the state treasury. Without going into lengthy detail, will state that in my opinion, it cannot be done by means with which I am conversant. If there has ever been any such thing as a self-supporting institution for the insane, I have never heard of it. If this is to be accomplished by the work of the patients, which is the presumption, then it is impossible on the face of it, for the percentage of really efficient farm labor in an institution of this kind will scarcely equal 10 per cent of the population.

IMPROVEMENTS NEEDED.

I have asked for the following improvements for the next biennium and herewith give explanation of same:

Lawn and Grounds.—This item is made up of innumerable small improvements continually needing attention in a large institution of this kind, also the laying out and equipment of an amusement park and recreation grounds for the women patients, which include buildings, fencing, shrubbery, walks, etc., also the extension of concrete sidewalks and curbing for the hospital roads and grounds. Estimated cost \$1,500.

Buildings.—New wing and equipment for greenhouse to carry out original design. Estimate of material furnished by supply company, together with freight from Chicago on same, also foundations, labor, etc., bring estimated cost of this item to \$1,000.00.

In order to increase capacity of piggery it will be necessary to build five hog houses and another farrowing house. This, together with the labor and material that is required for construction, is estimated to cost \$2,300.00.

Fireproof Vault.—This is considered necessary for the safe keeping of the hospital records and to prevent them from destruction in case of fire. Estimated cost of construction of concrete vault is \$800.00.

Storeroom Improvements.—In order to increase capacity of storeroom and render same sanitary and rat-proof, it will be necessary to lay cement floor and do considerable partitioning and plastering. Estimated cost of same is \$1,056.00.

Grand Stand at Ball Grounds.—Necessary to furnish seats and shelter at recreation grounds. The old stands are rotten, decayed and unsanitary. Estimated cost of stands capacious enough to take care of present needs, \$1,800.00.

Septic Tank.—Capacity for 1500 people. Sanitary measure, also enabling use of water from same for irrigation purposes, which now goes to waste. Estimates of cost based upon cost of tank at Institution for Feeble Minded, which has capacity for 600 people and cost \$2,000.00. Expect to furnish all labor, doing away with the expense of contract labor. By doing this we believe same can be installed for \$3,500.00.

Two Silos.—Situated at dairy barn and necessary to increase capacity for ensilage. Old silos too small. Either tile or cement of 120 capacity each. Estimated cost of both \$1,500.00.

Office Furniture and Equipment.—Includes sectional record cabinets, carpets, office chairs, typewriter, etc. Estimated cost \$400.00.

Household Furniture and Equipment.—Includes the following: presses, bedding, carpets, bed springs, beds for wards, 500 blankets, kitchen utensils and equipment, dishes, crockery and tin. Estimated cost of same is \$3,500.00.

Utility Equipment.—Includes the following: One motor truck to facilitate delivery of coal, movement of farm produce and haul freight. Cost based on price quoted, \$3,000.00.

Farm machinery and implements to provide for increasing farm operations include manure spreader, 3 wagons, 1 orchard cultivator, 1 planter, 1 mowing machine and two bob-sleds. Estimated cost same is \$1,060.00.

Machinery, Appliances and Plant.—One lathe, considered necessary for engineer to increase efficiency of machine shop, cost estimated quotation obtained by engineer, \$1,000.00.

Two motors, 5 h. p. each, to be used at state farm. Estimated cost engineer, \$200.00. To be used for pumping water and grinding feed.

Three transformers, 7½ K. W. each, to be used at state farm. Cost same, \$225.00.

Power and light lines to state farm, 1½ miles, necessary for safety, and increasing efficiency of farming operations. Present farm without electric lights or electric energy. Use oil for lights. Estimated cost of installing line, poles, and 3 wires 1½ miles, \$600.00.

Wiring and fixtures for Peat building; these buildings are occupied by farmer and need electric lights and fixtures. Estimated cost of installing same by engineer, \$150.00.

Enlarging water main from reservoir to boiler room includes 550 feet of 8-inch Calamine pipe, 1 C. I. T. 10x8x6-inch, 300 lbs. pig lead and 500 lbs. of jute. Estimated cost of same, \$635.00.

Enlarging water main from pump station to connecting main for institution for Feeble Minded. Necessary to take care of increased needs for water for both institutions. Present pipe too small and not strong enough to stand pressure of new pump. Considerable loss of capacity because of excess friction. Five thousand one hundred feet of 10-inch cast iron pipe, thickness ⅝ inch required, together with all accessories to install, and labor, estimated to cost \$7,336.00.

Library and School.—Includes books, piano, etc., for which \$700 is estimated.

Live Stock.—We have been particularly unfortunate during the last year in losing several teams of horses from an infectious disease peculiar to them, known as Equine Infectious Anemia. This disease has cost us of horses that otherwise could have been expected to ren-

Table No. 3.
SHOWING COUNTIES PATIENTS ADMITTED FROM.

COUNTIES	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
Adams	3	1	4		1	1
Asotin	2	2	4	2		2
Benton	1	1	2	2	2	5
Chelan	3	2	5	7	2	9
Columbia	4	2	6	1	1	2
Douglas	2		2	3	1	4
Ferry	2	3	5	1	3	4
Franklin	2	3	5	12	1	13
Garfield						
Grant	4	1	5	4	1	5
King	3	2	5			
Kittitas	9	1	10			
Klickitat	3		3	3	2	5
Lincoln	9	2	11	7	1	8
Okanogan	4	3	7	4	2	6
Pend Oreille	2		2	3	1	4
Penitentiary	10		10	7		7
Pierce	2		2			
Reformatory	2		2	3		3
Skagit				1		1
Skamania	1		1	1		1
Spokane	72	28	100	57	37	94
Stevens	7	7	14	7	1	8
Snohomish	1		1		1	1
Walla Walla	15	6	21	10	4	14
Whitman	8	9	17	5	4	9
Yakima	5	5	10			
Total.....	176	78	254	141	65	206

Table No. 4.
SHOWING CIVIL CONDITION OF PATIENTS ADMITTED.

CIVIL CONDITION	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
Married	66	46	102	44	25	79
Single	86	19	105	68	11	79
Widowed	6	6	12	6	9	15
Divorced	3	1	4	3	2	5
Unknown	25	6	31	20	8	28
Totals.....	176	78	254	141	65	206

Table No. 5.

SHOWING OCCUPATION OF PATIENTS ADMITTED.

OCCUPATION	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
.....	2	.....	2	.....	1	1
.....	1	.....	1	1	.....	1
.....	1	.....	1	.....	.....	.....
lth	1	.....	1	3	.....	3
.....	2	.....	2	.....	.....	.....
er .....	.....	.....	.....	1	.....	1
per and stenographer.....	1	.....	1	3	1	4
list	1	.....	1	.....	.....	.....
er	6	.....	6	6	.....	6
.....	1	.....	1	2	1	3
r	1	.....	1	.....	.....	.....
.....	1	1	2	3	.....	3
.....	1	.....	1	.....	.....	.....
.....	.....	1	1	.....	3	3
er .....	.....	3	3	.....	2	2
.....	6	.....	6	1	.....	1
an	1	.....	1	.....	.....	.....
fe	32	1	32	30	.....	30
.....	.....	59	59	.....	47	47
maker	1	.....	1	.....	.....	.....
an	1	.....	1	.....	.....	.....
r	1	.....	1	.....	.....	.....
th	1	.....	1	.....	.....	.....
.....	52	.....	52	33	.....	33
.....	.....	.....	.....	2	.....	2
man	1	1	2	1	.....	1
man .....	.....	.....	.....	3	.....	3
.....	1	.....	1	2	.....	2
.....	4	.....	4	2	.....	2
.....	10	.....	10	4	.....	4
.....	4	4	8	4	3	7
.....	.....	1	1	.....	.....	.....
.....	.....	.....	.....	1	.....	1
.....	1	.....	1	1	.....	1
.....	1	.....	1	1	.....	1
.....	.....	.....	.....	2	.....	2
peaker	1	.....	1	.....	.....	.....
laborer	2	.....	2	.....	.....	.....
conductor .....	.....	.....	.....	1	.....	1
ite .....	.....	.....	.....	.....	1	1
.....	1	.....	1	2	.....	2
oper	2	.....	2	1	.....	1
teacher .....	.....	2	2	.....	1	1
ker	1	.....	1	1	.....	1
.....	4	2	6	1	3	4
.....	.....	1	1	.....	.....	.....
der	1	.....	1	.....	.....	.....
.....	1	.....	1	.....	.....	.....
.....	2	.....	2	1	.....	1
.....	1	.....	1	.....	.....	.....
.....	5	.....	5	3	.....	3
.....	20	3	22	19	2	21
.....	.....	.....	.....	1	.....	1
tab.....	176	78	254	141	65	206

Table No. 6.
SHOWING ASSIGNED CAUSES OF DISEASES.

CAUSE	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
Alcohol	13		13	9	2	11
Child birth		6	6		3	3
Domestic trouble		1	1		1	1
Dissipation	1		1	1	1	2
Epilepsy	10	5	15	4		4
Exposure	1		1	3		3
Heredity	11	12	23	11	6	17
Imbecility				3		3
Injury to head	5		5	5	1	6
Influence of hypnotist	1		1			
Isolation	1		1	2	1	3
Jealousy		1	1			
La grippe	1		1	1		1
Masturbation	3		3	9	2	11
Menopause					4	4
Morphine	1		1			
Nephritis	2		2		2	2
Neurasthenia		1	1		1	1
Overwork	1		1			
Puerperal		2	2			
Pregnancy		3	3			
Religion	2	8	10	1	3	4
Sensility	3	3	6	6	1	7
Syphilis	16	1	17	14		14
Sexual desire	1		1		1	1
Sterility				1		1
Typhoid		1	1			
Unknown	92	28	120	65	33	98
Worry over business	6		6	4		4
Worry over love affair	1		1			
Worry over family affairs	1	3	4	1	1	2
Worry over loss of relative	1	2	3	1	1	2
Worry over European war	2		2			
Totals	176	78	254	141	65	206

Table No. 6.
SHOWING ASSIGNED CAUSES OF DISEASES.

CAUSE	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
Alcohol	13		13	9	2	11
Child birth		6	6		3	3
Domestic trouble		1	1		1	1
Dissipation	1		1	1	1	2
Epilepsy	10	5	15	4		4
Exposure	1		1	3		3
Heredity	11	12	23	11	6	17
Imbecility				3		3
Injury to head.....	5		5	5	1	6
Influence of hypnotist.....	1		1			
Isolation	1		1	2	1	3
Jealousy		1	1			
La grippe	1		1	1		1
Masturbation	3		3	9	2	11
Menopause					4	4
Morphine	1		1			
Nephritis	2		2		2	2
Neurasthenia		1	1		1	1
Overwork	1	1	2			
Puerperal		2	2			
Pregnancy		3	3		1	1
Religion	3	3	10	1	3	4
Sensility	3	3	6	6	1	7
Syphilis	10	1	17	14		14
Sexual desire	1		1		1	1
Sterility				1		1
Typhoid		1	1			
Unknown	92	23	120	65	25	95
Worry over business	6		6	4		4
Worry over love affair	1		1			
Worry over family affairs	1	3	4	1	1	2
Worry over loss of relative.....	1	2	3	1	1	2
Worry over European war	2		2			
Totals.....	170	73	254	141	65	206

(12)

Table No. 7.
AGES OF PATIENTS ADMITTED.

AGES	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
Between 10 and 15 years.....	2	.....	2	.....	.....	.....
Between 15 and 20 years.....	4	1	5	3	5	8
Between 20 and 25 years.....	18	13	31	10	8	18
Between 25 and 30 years.....	14	13	27	16	7	23
Between 30 and 35 years.....	22	10	32	19	8	27
Between 35 and 40 years.....	22	12	34	17	4	21
Between 40 and 45 years.....	18	2	20	14	9	23
Between 45 and 50 years.....	26	5	31	14	13	27
Between 50 and 55 years.....	18	3	21	6	3	9
Between 55 and 60 years.....	11	5	16	7	1	8
Between 60 and 65 years.....	10	1	11	6	2	8
Between 65 and 70 years.....	2	4	6	6	.....	6
Between 70 and 75 years.....	6	1	7	4	1	5
Between 75 and 80 years.....	3	2	5	3	.....	3
Between 80 and 85 years.....	1	.....	1	2	.....	2
Between 85 and 95 years.....	.....	1	1	1	.....	1
Unknown.....	16	.....	16	13	4	17
Totals.....	176	78	254	141	65	206

Table No. 8.
DURATION OF DISEASE PRIOR TO LAST ADMISSION.

DURATION	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
One month.....	60	20	80	40	20	60
Two to three months.....	19	15	34	23	12	35
Four to six months.....	15	8	23	11	6	17
Seven to twelve months.....	11	7	18	9	6	15
One to two years.....	8	5	13	9	7	16
Three to five years.....	13	10	23	9	6	15
Six to ten years.....	9	3	12	2	3	5
Eleven to twenty years.....	6	1	7	2	1	3
Twenty-one to twenty-five years.....	1	2	3	2	.....	2
Perinatal.....	.....	1	1	3	.....	3
Unknown.....	44	6	50	39	4	43
Totals.....	176	78	254	141	65	206

Table No. 9.
SHOWING NUMBER OF ATTACKS OF PATIENTS ADMITTED.

NUMBER OF ATTACKS	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
First attack	80	41	130	64	38	102
Second attack	14	12	26	20	7	27
Third attack	6	10	16	4	4	8
Fourth attack	1	.....	1	2	4	6
Fifth attack	1	.....	1	1	1	2
Sixth attack .....	.....	.....	.....	1	1	2
Eleventh attack .....	.....	.....	.....	.....	1	1
Unknown	42	9	51	37	3	40
Several attacks	23	6	29	12	6	18
Totals	176	78	254	141	65	206

Table No. 10.
SHOWING FORMS OF INSANITY OF PATIENTS ADMITTED.

FORM OF DISEASE	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
Infective exhaustive psychoses.....	2	7	9	3	5	8
Intoxication psychoses:						
Acute alcoholic hallucinosis.....	18	4	22	12	2	14
Chronic alcoholism	2	.....	2	.....	1	1
Morphinism .....	.....	1	1	1	1	2
Belladonna poisoning .....	.....	.....	.....	1	.....	1
Dementia praecox:						
Hebephrenic	17	7	24	20	9	29
Catatonic	3	5	8	1	7	8
Paranoid	35	8	43	26	5	31
Allied to dementia praecox.....	1	1	2	1	2	3
Organic dementia:						
Dementia paralytica	17	2	19	11	1	12
Tabes dorsalis	5	.....	5	.....	.....	.....
Arterio sclerotic insanity.....	1	.....	1	1	.....	.....
Post-hemiplegic	3	2	5	.....	2	2
Involution psychoses:						
Melancholia .....	.....	.....	.....	.....	1	1
Pre-senile delusional insanity.....	9	4	13	4	3	7
Senile delusional insanity.....	1	1	2	1	.....	1
Senile dementia	19	4	23	25	.....	25
Manic depressive insanity:						
Maniacal form	13	13	26	16	12	28
Depressed form	12	6	18	9	6	15
Mixed form .....	.....	3	3	.....	.....	.....
Paranoia .....	.....	.....	.....	1	1	2
General neuroses:						
Epileptic insanity	10	5	15	4	.....	4
Huntington's chorea .....	.....	.....	.....	1	.....	1
Constitutional inferiority	7	3	10	1	1	2
Imbecility .....	.....	.....	.....	2	.....	2
Borderland cases .....	.....	1	1	.....	3	3
Unclassified	1	.....	1	1	1	2
Not insane .....	.....	1	1	.....	.....	.....
Totals	176	78	254	141	65	206

Year Ending September 30, 1916

Year Ending September 30, 1913

FORM OF DISEASE

FORM OF DISEASE	RECOVERED			IMPROVED			UNIMPROVED			RECOVERED			IMPROVED			UNIMPROVED		
	RECOVERED			IMPROVED			UNIMPROVED			RECOVERED			IMPROVED			UNIMPROVED		
	Male	Fe- male	Total	Male	Fe- male	Total	Male	Fe- male	Total	Male	Fe- male	Total	Male	Fe- male	Total	Male	Fe- male	Total
Dementia Praecox:																		
Hebephrenic	17	2	19							14	2	16				1		1
Catatonic		1	1								1	1						
Paranoid	7	2	9							7	1	8	2	2	4	3		3
Allied to	1		1							4	2	6	1		1	5	1	6
Organic Dementia:	2	2	4							6		6	1		1			
Tabes dorsalis																		
Dementia paralytica							1		1							3		3
Post-hemiplegic insanity							1		1									
Involution Psychoses:																		
Pre-senile delusional insanity		1	1															
Senile Dementia																		
Manic Depressive Insanity:																		
Maniacal form	9	2	11							13	8	21	4		4			
Depressed form	10	2	12							6	5	11	4		4	2	1	3
Allied to	1		1							4	2	4						
Symptomatic depression												2			2			
Constitutional inferiority																		
Imbecility		1	1													1		1
Not insane																1		1
Unclassified	1		1								1	1						
Borderland cases											2	2						
Totals...	43	13	61	9	9	18	4	7	11	54	26	80	32	6	38	17	5	22

Table No. 12.
SHOWING CAUSES OF DEATH.

CAUSE	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
Arterio sclerosis	7	4	11	6	1	7
Aortic regurgitation	2		2			
Acute delirious mania.....	1		1			
Aorta, ruptured aneurism.....	1		1			
Carcinoma of stomach.....	1		1	3		3
Carcinoma of tongue and jaw.....	1		1			
Carcinoma of sigmoid.....	1		1			
Carcinoma of ileum.....	1		1			
Cellulitis of neck.....				1		1
Cerebral hemorrhage	4	1	5	3	2	5
Dementia, exhaustion from.....	1		1			
Dementia, senile				1		1
Epilepsy, exhaustion from.....	1		1	5		5
Erysipelas, facial		1	1			
Endocarditis, malignant					1	1
Huntington's chorea		1	1			
Infective exhaustive psychosis.....	1	3	4		1	1
Mania, exhaustion from.....		1	1	3	2	5
Mitral regurgitation	1	1	2	5	2	7
Nephritis, chronic	4	1	5	3	1	4
Nephritis, acute		1	1	2		2
Oedema of glottis from infection of mouth.....	1		1			
Paralytica, dementia	12	1	13	11		11
Pneumonia, lobar	4	4	8	5	3	8
Peritonitis and ileus.....				1		1
Post-hemiplegic insanity		2	2			
Pneumonia, terminal	1		1			
Status epilepticus	2		2		1	1
Suicide by hanging.....		1	1			
Suicide by fall from window.....				1		1
Tubes dorsalis	1		1			
Tuberculosis, pulmonary		4	4	4	2	6
Totals.....	48	36	74	54	16	70

Table No. 13.

SHOWING AGES OF PATIENTS WHO DIED IN HOSPITAL.

AGE AT DEATH	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
ween 10 and 15 years.....	1	.....	1	.....	.....	.....
ween 15 and 20 years.....	.....	.....	.....	.....	.....	.....
ween 20 and 25 years.....	.....	2	2	.....	.....	.....
ween 25 and 30 years.....	2	.....	2	2	3	5
ween 30 and 35 years.....	2	2	4	7	1	8
ween 35 and 40 years.....	4	3	7	5	.....	5
ween 40 and 45 years.....	3	.....	3	3	4	7
ween 45 and 50 years.....	2	3	5	3	.....	3
ween 50 and 55 years.....	5	1	6	3	2	5
ween 55 and 60 years.....	8	4	12	5	2	7
ween 60 and 65 years.....	6	4	10	5	1	6
ween 65 and 70 years.....	2	2	4	2	.....	2
ween 70 and 75 years.....	6	.....	6	3	2	5
ween 75 and 80 years.....	1	4	5	4	.....	4
ween 80 and 85 years.....	2	.....	2	3	.....	3
ween 85 and 95 years.....	1	1	2	1	1	2
known	3	.....	3	1	.....	1
Totals.....	48	26	74	64	16	80

Table No. 14.
SHOWING NUMBER OF ADMISSIONS, RECOVERIES AND DEATHS.

YEAR ENDING	Admissions.....	Whole number treated....	Discharged recovered....	Discharged not recovered.....	Died.....	Escaped.....	Remaining.....	Increase.....	Decrease.....	Per cent. of recoveries to admissions.....	Per cent. of deaths to whole number treated....
Received from Western Hospital..	122										
September 30, 1891.....	20	142	6		8	1	133	1		30.00	2.11
September 30, 1892.....	74	207	36		7	9	164	31		45.64	3.38
September 30, 1893.....	53	197	23	2	12		182	18		43.40	5.52
September 30, 1894.....	66	248	31	4	10	4	207	25		46.97	4.08
September 30, 1895.....	57	264	38	4	8		219	12		66.66	3.08
September 30, 1896.....	76	294	26	4	16	6	251	32		34.21	5.44
September 30, 1897.....	84	335	32		17	5	286	35		38.10	5.07
September 30, 1898.....	106	392	58	26	26	4	278	1		50.00	6.63
September 30, 1899.....	114	397	40	6	33	5	313	26		35.04	8.31
September 30, 1900.....	123	436	62	24	21	1	325	12		50.80	4.81
September 30, 1901.....	144	469	48	34	25		367	42		29.86	4.33
September 30, 1902.....	143	510	26	56	45	1	380	13		18.11	8.82
September 30, 1903.....	150	530	33	79	27		390	10		22.00	5.09
September 30, 1904.....	171	561	22	58	33		440	50		12.92	5.88
September 30, 1905.....	171	611	32	64	34		481	41		18.71	5.56
September 30, 1906.....	166	647	44	43	42		518	37		26.50	6.49
September 30, 1907.....	198	711	37	44	47		581	63		19.17	6.61
September 30, 1908.....	228	809	70	47	51		638	57		30.74	6.30
September 30, 1909.....	229	867	44	43	48		732	94		19.21	5.53
September 30, 1910.....	261	898	59	56	71		807	75		22.61	7.15
September 30, 1911.....	265	1,071	62	57	65		887	80		23.89	6.06
September 30, 1912.....	255	1,142	78	66	78		920	33		30.58	6.88
September 30, 1913.....	273	1,193	86	75	86		946	26		31.50	7.20
September 30, 1914.....	279	1,225	47	52	70		1,056	110		16.84	5.71
September 30, 1915.....	254	1,310	61	29	74		1,146	90		24.01	5.63
September 30, 1916.....	206	1,352	80	60	70		1,142		4	38.83	5.17

Table No. 15.
SUMMARY OF POPULATION.

	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
Patients in hospital at beginning of term.	719	227	1,066	786	300	1,146
Patients admitted on commitment during term	164	78	242	131	65	196
Patients received from State Penitentiary.	10	.....	10	7	.....	7
Patients received from State Reformatory	2	.....	2	3	.....	3
Total admissions	176	78	254	141	65	206
Number of patients in hospital during term	806	415	1,310	927	425	1,352
Patients discharged as "recovered".....	43	13	61	54	25	79
Patients discharged as "improved".....	9	9	18	32	6	38
Patients discharged as "unimproved".....	4	7	11	17	5	22
Patients discharged as "not insane".....	.....	.....	.....	.....	1	1
Patients died	48	26	74	54	16	70
Number of vacancies created.....	100	55	164	157	53	210
Number of patients remaining at end of term.....	786	300	1,146	770	372	1,142

NORTHERN STATE HOSPITAL.

To the Honorable State Board of Control.

GENTLEMEN: In accordance with the law I respectfully submit herewith the report of the Northern State Hospital for the two years beginning October 1st, 1914, and ending September 30th, 1916.

The institution was formerly a branch of the Western Hospital for the Insane, but by an act of the legislature of 1915, was established as the Northern State Hospital. Provisions being made to receive and care for all cases committed to the institution from the nine northern counties, as follows:

Kitsap, King, Snohomish, Skagit, Whatcom, Jefferson, Clallam, Island and San Juan.

There were present in the institution October 1st, 1914, 287 patients. Admitted during the first period by transfer from the Western State Hospital, 221, and committed direct, 125. The whole number treated being 633. There were 58 vacancies created, as follows:

Discharged, 32; died, 26; remaining in hospital, September 30th, 1915, 575. Increase in twelve months, 288.

During the second period there were admitted 230 men and 98 women, making a total of 328. Whole number treated, 903. There were 211 vacancies created as follows:

Discharged, 122 (included in this number 19 deported to foreign countries); died, 89. Remaining in hospital September 30th, 692.

In reviewing the work done at the institution during the biennium I have arranged a table showing buildings constructed; improvements in various departments; additional lands cleared and put under cultivation; new roads and bridges built, etc.

It does not seem necessary to explain all this in detail but some departments require special mention.

The buildings completed and now under construction are all class "A," concrete and tile with tile roofs, and are as near fireproof as buildings of this class can be made, and have been planned in accordance with the requirements of the service since operating under changed conditions; that of receiving hospital, where all forms of insanity are cared for as committed from the various counties.

The laundry building is completed and is now in use for regular laundry work. The building was occupied on September 4th, 1916, and is highly satisfactory in point of service. It is probably one of the most modern buildings of this type in the west. The windows are all of opalescent glass, which affords a very soft and comfortable light for those employed.

The auditorium is nearing completion. This building will have a seating capacity of 800; and will be furnished with movable seats to afford floor space for dancing. A stage and dressing rooms have been

led for entertainments, religious services, etc., and in addition to piano and moving picture machine will be provided for the entertainment of the patients.

Two years ago I reported 159 acres of land cleared. Of this 159 75 are in the hospital grounds proper. The remaining 84 acres under cultivation. During this biennium 35 additional acres have been cleared of timber and stumps, and 30 acres of this tract planted to corn. These are now being harvested and show a yield of 150 tons, nearly double the required amount of these vegetables for our

In this connection I desire to state that last year all vegetables consumed by the entire population were raised upon the farm except a quantity of onions. This year a sufficient amount of all vegetables have been raised to meet the needs of the hospital, and in addition 50 tons of corn ensilage, 100 tons of clover and grain hay, and 10 tons of beets and mangels have been raised and stored which feed the entire herd now numbering 98 head.

You will note by this that the self-supporting institution is rapidly growing, and it is an interesting record, considering that the first clearing done on this section of logged off land, which was covered with hemlock's heaviest timber, was in 1911, only six years ago.

The source of our water supply and reservoirs are in excellent condition. The diversion dam constructed for the purpose of sluicing the water around the reservoir, is operating successfully, and this will require no further outlay unless it be for the purchase of additional land to preserve the timber on the water-shed. Both reservoirs have been completely fenced against all animals.

The following is a complete list of new construction and improvements:

One ward building for men and one ward building for women and a auditorium now under construction.

The following buildings have been completed:

Laundry, horse barn, cow barn, hay barn, implement shed, manure tank, liquid manure tank, silo, milk house and root house; diversion dam at headwaters, enlarged and completed primary reservoirs; built new tank; surfaced with crushed rock 7,000 feet of road; built new road from hospital to new barns, 3,000 feet, which is surfaced with gravel; built bridge 125 feet long north of barns; fenced north and east of state lands in sections 7 and 8; also along new roads, and ran cross fences dividing lands into small tracts for pasture and

Thirty-five acres have been cleared of stumps and are now under cultivation. Several hundred acres have been slashed and partially cut down timber, from which we have obtained 1,680 cords of lumber preparatory to blowing and pulling stumps beginning next spring. Several acres of land about the buildings have been leveled and mowed down to lawn. Eighty-six shade trees were set out last spring,

and many vines and shrubs were planted about the buildings and grounds.

The electric lighting and telephone lines between the hospital and farm buildings have been replaced along the new road, the change being necessary on account of the new buildings interfering with the old lines.

The surgical department has been equipped for ordinary work, but much more is needed to provide complete equipment.

Three hundred volumes of the standard authors forms the nucleus of a library for the use of the patients.

RECOMMENDATIONS.

The estimated cost of buildings and other improvements as shown on the following sheets, have been furnished by architects, who have made plans for buildings, and engineers who have made surveys of the proposed improvements.

Two male ward buildings.....	\$140,000 00
One wing to complete female ward building.....	28,000 00
One tubercular ward building.....	40,000 00
One nurses' home	87,000 00
One commissary and store house.....	17,500 00
One cow barn	8,000 00
One feed shed	2,000 00
Feed shed equipment.....	1,000 00
One piggery	3,000 00
One green house	2,000 00
One morgue building	5,000 00
One permanent power house and necessary equipment	35,750 00
Household furniture and equipment.....	12,000 00
Concrete trestles and supports for main water line including storm sewer, new water mains, etc.	13,000 00
Shop equipment	2,250 00
Laundry equipment	5,000 00
Surgery and hydrotherapeutic department.....	10,500 00
Additional filter bed.....	3,000 00
Entertainments, amusements	1,500 00
Land clearing, fencing, nursery stock.....	7,000 00
Completion auditorium basement.....	3,000 00

Two Ward Buildings.—These two buildings will be needed to properly house and care for the increase in population during the period from April 1, 1917, to March 30, 1919, as shown by the following figures:

Present normal capacity	520
Present population	680
Estimated increase based on total gain past 14 months...	220
Estimated population 3-31-19.....	880
Normal capacity of buildings when buildings under construction are completed.....	760
Total capacity including new wards as planned.....	900
Estimated grand total in and out of house March 31, 1919	930

Note carefully the crowded condition of the wards as shown by the figures, and that the expected population will tax the buildings to capacity.

The additional wing for the female ward will almost double its capacity and will provide a sufficient number of beds to provide for the expected increase in this department of the service.

We are now receiving patients from nine counties in the state, having a larger population than either of the other two districts, and as a result our growth is more rapid than that of the other institutions.

Tubercular Ward Building.—A number of patients are afflicted with tuberculosis in the varying stages of the disease. Some of these develop the condition after years of residence in the hospital, being especially susceptible as a result of their mental disturbance, while too recently patients are committed from other hospitals in an advanced stage of the disease. All these must be cared for in the general ward buildings, as there is no special department constructed or equipped for the isolation and care of these cases, and while all possible care and protection is given, the danger of the spread of the disease is great, owing to the inability of those affected to co-operate with the physicians and nurses in the management of the case.

Modern treatment requires that these cases be housed in a building especially adapted to their care, and apart from other hospital buildings.

Plans have been made for such a building, to be of permanent fireproof construction, sanitary in every detail, and to accommodate 16 male and 16 female patients.

It is planned to place this building on the west side of the state property, on high ground, and make it independent of the hospital proper, and isolate and treat all cases affected by this condition in this building.

Nurses' Home.—During the development of the institution no provision has been made for the housing of the employees, except that in some of the wards, rooms were provided for the nursing staff only. Every available space has been utilized to house the employees. In many instances these rooms are very uncomfortable and undesirable quarters.

For instance—the night watches are obliged to remain and sleep in the cottages where 100 patients are confined. Their rest is frequently broken and disturbed by the noises incident to the care of this number of people during the day.

The day nurses also sleep in the same building where they are employed thirteen hours a day. Other quarters should be supplied for the nurses, which will give them a change of scene and surroundings. The rooms vacated by them would increase the capacity of the building for patients.

I recommend that a nurses' home be provided in accordance with the plans submitted, feeling that such a building will materially increase the efficiency of the employees, and promote the welfare of the patients under their care.

Commissary Building.—The supplies for the maintenance of the entire population, now totaling 750 people, are purchased semi-annually and shipped to the institution in April and October of each year, in car loads and less.

No provision has been made for the storing of these goods and in the past we have been obliged to order our goods shipped as needed, at an increased cost, because we were unable to store and care for them in the amounts called for in the contracts. These goods have been stored in old frame buildings and basements, and in many instances resulted in damage and loss.

The old temporary store house used last year collapsed, and we were obliged to raze and remove it this fall. It will be necessary to construct some building for the storing of these supplies, and I recommend that a concrete, fire and rat-proof building be constructed in accordance with the plans submitted.

Cow Barn, Feed Shed, Piggery, Etc.—The barn built last year contains 80 stalls. We now have 98 head of stock, and there will be a steady increase in the herd, as it is the intention to raise as much stock for beef as grazing lands will care for, and to increase the number of milch cows until sufficient butter can be produced to meet the needs of the institution.

In view of these plans, one additional barn will be needed as soon as it can be built. The present barn can be duplicated from plans at the office.

In connection with the barns, a feed shed properly equipped for the preparation of food for the herd, according to modern dairy methods, should be built. For these buildings and equipment \$11,000.00 is needed.

A piggery has been built on the lands to the northeast of the hospital buildings, located in accordance with the Olmstead plans. Sufficient funds were not available to complete this department. I would recommend that \$3,000.00 be appropriated for the construction of a concrete feeding pen and slaughterhouse.

Greenhouse.—We now have 120 acres of land under cultivation, and as this is the most northerly institution in the state, it is difficult at times to get the crops in in proper season for best results. A greenhouse would enable us to start our plants early, to be transplanted, and to raise and care for many of the plants and shrubs necessary for the improvement of the grounds. Two thousand dollars will be required for this building.

Morgue Building.—When a death occurs at the hospital it is necessary for us to hold the remains until relatives can be notified, and ar-

gements made for their removal. Frequently we are obliged to leave these remains two days, and as no special room or building has been provided for this purpose, it results in a somewhat serious inconvenience.

To improve this condition I would ask that a small morgue building be erected, which will provide a morgue room, columbarium, laboratory and post-mortem room. A suitable building can be built for \$10,000.00, and is very necessary for the best interests of the institution.

Power House and Installation of Equipment.—The completed plans for the power house show four boilers. Two of these have been installed, and with three generators, furnish heat, light and power. This equipment is housed in a temporary building, one-half the size originally planned, constructed of frame and corrugated iron with a wood roof over the engine room.

As now planned, fourteen of the nineteen buildings will have been completed in 1919, and it will be necessary to install one additional boiler with automatic stoker. Until last winter we had been able to obtain sufficient wood for fuel from the down timber on the property, but as the remaining wood became so scattered and so far away from the power house we were obliged at this time to purchase mill wood to meet the demands, and in addition to this we were obliged to purchase thousands of tons of coal, as the mills were unable to furnish the usual supply during the cold weather of December, January and February of last year. It is only when the local mills are running to full capacity that we can depend upon this source of supply, and this is too uncertain for an institution of this class and size, so preparation for coal burning must be made.

It is planned to install one additional boiler with automatic stoker, and a second stoker to be connected with boiler No. 2 now installed. To change boiler No. 1 with a wood grate to burn the wood as taken from the farm lands.

This additional equipment will require the completion of the power house as originally planned, and I would ask that an appropriation be made for the erection of the permanent power house, as further outlay on the old temporary building by repairing and extending to provide for new boilers would not be economical or advisable.

Household Equipment.—The item of household furniture and equipment, for which \$12,000.00 is recommended, is for complete furnishings for the proposed new buildings, and to complete the furnishings of the buildings built during this biennium. This item has not been included in the estimates of cost and of the new buildings asked for. Under the new system these items are taken up separately in order that the same may be provided for by an appropriation to cover the cost of each.

Water System.—The protection of our water supply is the most important matter under consideration at this time. The source of this supply is from the mountains about three miles north of the hospital.

The system consists of a diversion dam; primary and secondary reservoirs; the latter being two and one-half miles from the hospital. From here the water is conducted through a ten inch wood stave pipe to the powerhouse. In the course of this pipe line are four ravines which are crossed with wooden trestles supporting the pipe line. These were built five years ago and are now badly out of line from settling. Through two of these ravines there is a large flow of water during the winter and spring, and on one occasion during the past winter seven of the supports were washed out as a result of a sudden rise of water during the night, causing a sag in the line which opened a joint in the pipe connection. Supports were placed to prevent further damage, but it was only by turning the flow of the stream by ditching, and a liberal use of dynamite that a complete wash-out of the line was prevented.

To prevent further damage and a possible loss of our water supply these trestles should be replaced with concrete and steel structures of sufficient width to carry the pipe lines and steel bridges.

It is necessary several times a year to visit the headwaters to inspect and cleanse the reservoirs, and to reach there we are obliged to travel nine miles by county road. If a road and bridges were built along the course of the pipe line the distance would be only three miles.

Much of the wood and timber remaining is in this section, and it seems to me that bridges should be built that would provide a road and carry the pipe line as well. This work could be done more economically at this time than later.

The estimated cost of this by a competent engineer who has been over the ground is placed at \$9,665.00, for permanent concrete and steel trestles to span the four ravines along this line, a total of 802 feet.

The extension of the water line from the power house to the administration building and cottages is a three inch pipe. With the addition of the new buildings this pipe will be much too small to furnish the ordinary house pressure, and before the baths now being installed in the new buildings can operate successfully, and without injury to the service in other departments, the lines must be replaced with a six inch main which will supply all future demands.

A new three inch line to the farm buildings is needed to replace the one inch line formerly used to supply the old temporary buildings. This line should run from the main north of the power house about 1,000 feet, by the piggery and site of green house to the barns. The old three inch line removed from the administration building to be used as a part of the new line to the farm buildings.

Shop Equipment.—In recommending the purchase of iron and wood working machinery I have in mind not only the advantage of immediate repairs to our plant, but the welfare of the men under treatment. Many of these are skilled workers in various lines, and would be greatly benefited by employment along the lines for which they have been trained.

With this machinery a great deal of the furniture needed for the hospital can be manufactured. Such employment keeps these patients more contented while under treatment, and increases their chances of recovery.

Laundry Equipment.—The new laundry building recently completed is now occupied, and is very satisfactory. It is light, spacious, well heated and ventilated, and especially well adapted for institution work. We need only additional machinery to meet the gradually increasing demands.

The machinery now in use was purchased five years ago when the population was less than 300, and is now inadequate for the service required for a population of 763.

Surgical and Hydrotherapeutic Departments.—Many of our patients require surgical treatment to relieve physical suffering, and many important operations have been performed during the past year. Frequently the patients, owing to their mental condition, are unable to assist the physician or surgeon in making his diagnosis, and for this reason we would urgently request that an X-Ray machine be furnished in connection with this department in order that we may give the patients the treatment that they require and that is demanded by the public and the profession in all hospitals.

During the construction of the administration building rooms were provided for hydrotherapeutic departments, but these rooms have not yet been equipped. As we are now receiving many acute cases of insanity, it is very necessary that these patients have the advantage of a modern and beneficial agent. I would recommend that \$8,000.00 be appropriated for the completion and preparation of the rooms, and the installation of complete hydrotherapeutic equipment.

Filter Beds.—Of the ten filter beds shown on the plan of the Imhoff sewer system, the first unit only was constructed four years ago and is for a population of 250. Our present population is 750, and it is imperative that additional beds be built to act in conjunction with the existing septic tank just completed, for final treatment of the sewage. \$10,000.00 would be required for the completion of an additional bed.

Land Clearing.—I would recommend that \$7,000.00 be appropriated for the purpose of clearing land, erection of fences, purchase of nursery stock for setting out orchards, shade trees and shrubbery.

Under this item of \$7,000.00 is included wire fencing for enclosing the tracts and dividing them into smaller tracts for grazing, etc.; nursery stock, which will be necessary at this time, as sufficient land has been cleared to provide for the setting out of orchards, shade trees and shrubbery.

Auditorium Basement.—I would recommend that \$3,000.00 be appropriated for the completion and furnishing of the first story full basement of the auditorium building, now under construction, designed

for social rooms for the employees. This was not included in the contract for the building, as the appropriation was not of sufficient amount to cover cost.

It is necessary that such quarters be provided for recreation and amusement of the employees in order that the services of the very best nurses and other employees may be secured and continued.

Storm Sewers.—A large amount of vitrified sewer pipe is needed to drain the roads and grounds of surface water resulting from the heavy rainfall during the winter months.

In the past the water has frequently formed small lakes about the grounds, seriously damaging roads and making hauling over them almost impossible, and finally draining into the basements of the buildings where it slowly drains away through the storm sewer system. For this purpose I would recommend an appropriation of \$4,000.00.

Repairs and Improvements.—While the institution is new, numerous repairs are required during a two year period as a result of breakage, repainting, replacement of furniture, glass and other items. For this purpose I ask that \$2,500.00 be appropriated.

In conclusion, I desire to express my appreciation to your board for your co-operation and support in the many important matters considered this two-year period of construction and development of the institution, the consciousness of which has made me better able to conduct the affairs of the institution; also to thank the officers and employees for their assistance.

Respectfully submitted,

J. W. DOUGHERY,
Superintendent.

DISCHARGED

MONTHS

1914

October

November

December

1915

January

February

March

April

May

June

July

August

September

Total

1915

October

November

December

1916

January

February

March

April

May

June

July

August

September

Total

MONTHS		Admitted		Recovered		Improved		Unimproved		Deported		Not Insane	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
1914													
October													
November		21	10										
December		145	42										
1915													
January													
February						2							
March		1		1									
April													
May			1	2	2								
June		14	2										
July		27	12	4	2	5							
August		21	16	3	1		1						
September		23	10	3	1			1					
Total		258	93	13	6	7	1	1					
1915													
October		11	9		1		1					1	
November		18	10										
December		20	13	1	2			1					
1916													
January		26	7	2	3	3	1						
February		20	6							2			
March		27	10	2	1								
April		17	7	1	1	1				4			
May		20	10	2		2				1		1	
June		19	4	3						1			
July		22	6	12	5	6		2					1
August		15	8	1				1		9		1	
September		17	6	13	8	3		1				1	
Total		232	96	46	21	15	2	3	2	17	2	4	2

Table No. 1.—Showing Movement of Population—Concluded.

MONTHS	Transferred to Western State Hospital		Transferred to Eastern State Hospital		Paroled Returned		Paroled Not Returned		Escapes Returned		Escapes Not Returned		Died	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
1914														
October					1	1			2				1	
November									1					
December						1	1		2				1	
1915														
January					2			2	1				1	
February								2						
March							2	2	3				1	
April						1	1	1	4				2	1
May						1		1	2				3	
June							1	1	5				1	
July							1	1	1				1	
August			8				8	4	1				1	2
September						1	2	2	2				7	1
Totals	1	3			3	5	10	12	23		15		21	5
1915														
October					1				2				2	3
November							2	1					6	3
December						1	1	3	2				5	2
1916														
January							2	1					9	3
February	1					1			1				6	4
March					1	1	4	3					4	2
April					1	1	2	5	4				5	1
May			1		2		1	1	1				6	3
June					1	2	3	3	1				4	
July						1	9	7					6	2
August					2		5	2	2				4	1
September							5	2					4	3
Totals	8	2	1	1	8	7	32	31	17	1	22		62	27

Table No. 2.

SHOWING ADMISSION OF PATIENTS FROM COUNTIES.

COUNTIES	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
Adams	2	1	3	2	1	3
Benton	1	2	3	1	1	2
Boone	1	1	2	5	1	6
Butte	59	26	84	157	59	210
Cherokee	1	1	2	7	6	13
Crittenden					1	1
Cross	3	2	5	14	8	17
Franklin	12	6	17	31	12	33
Garland	1		1	3	2	5
Graves	1	3	9	19	14	23
Transferred from Western State Hospital, Stellacoom, Washington	168	53	221	1	1	2
Transferred from Eastern State Hospital, Medical Lake, Washington					1	1
Transferred from State Reformatory, Mason, Washington				2		2
Totals	258	98	346	222	96	328

Table No. 3.

SHOWING NUMBER OF ADMISSIONS, RECOVERIES, DEATHS, ETC.

YEAR ENDING	Admissions	Whole Number Treated	Discharged—Recovered	Discharged—Not Recovered	Discharged—Not Insane	Deported	Med.	Escaped	Remaining	Increase	Per Cent of Recoveries to Admissions	Per Cent of Deaths to Whole Number Treated
September, 1915—												
Transferred from Western State Hospital, Fort Stellacoom, Washington	221											
Transferred from Eastern State Hospital, Medical Lake, Washington	125	680	19	18			26	16	575	273	5.491	4.107
September, 1916—												
Transferred from Western State Hospital, Fort Stellacoom, Washington	2											
Transferred from Eastern State Hospital, Medical Lake, Washington	1											
Transferred from Washington Reformatory, Mason, Wash.	2											
Transferred from Washington Reformatory, Mason, Wash.	323	902	67	30	6	19	89	22	692	117	20.426	9.843
Totals	674		86	43	6	19	115	37				

Table No. 4.
SHOWING CIVIL CONDITION OF PATIENTS ADMITTED.

CIVIL CONDITION	From October 1, 1914, to September 30, 1915			From October 1, 1915, to September 30, 1916		
	Male	Female	Total	Male	Female	Total
Married	47	54	101	79	66	145
Single	163	31	194	118	17	135
Widowers or widows	10	5	15	14	8	22
Divorced	5	.....	5	4	3	7
Unknown	23	3	31	17	2	19
Totals.....	253	93	346	232	96	328

Table No. 5.
SHOWING NATIVITY OF PATIENTS ADMITTED.

COUNTRIES	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
Austria	11	1	12	9	4	13
Assyria	1	.....	1	.....	.....	.....
Azore Islands .....	.....	.....	.....	1	.....	1
Belgium	1	.....	1	.....	.....	.....
Bohemia .....	.....	1	1	2	.....	2
Bulgaria	1	.....	1	.....	.....	.....
China	2	.....	2	1	.....	1
Canada	9	7	16	12	3	15
Denmark	2	.....	2	6	.....	6
England	7	4	11	8	3	11
Finland	10	1	11	7	2	9
France	4	1	5	3	1	4
Germany	14	5	19	5	5	10
Greenland .....	.....	1	1	.....	.....	.....
Greece	2	.....	2	2	.....	2
Galacia .....	.....	.....	.....	1	.....	1
Holland .....	.....	.....	.....	1	.....	1
Ireland	12	2	14	5	3	8
Iceland	2	.....	2	2	.....	2
Italy	2	1	3	2	1	3
Japan	1	2	3	2	1	3
Korea	1	.....	1	.....	.....	.....
Montenegro	1	.....	1	1	.....	1
Norway	13	4	17	14	7	21
New Foundland	1	.....	1	2	.....	2
New Brunswick	2	.....	2	2	.....	2
Nova Scotia	1	.....	1	2	.....	2
Philippine Islands	1	.....	1	.....	.....	.....
Poland	3	.....	3	1	.....	1
Prussia .....	.....	.....	.....	1	.....	1
Russia	4	1	5	4	1	5
Roumania	1	.....	1	.....	.....	.....
Sweden	29	7	36	8	7	15
Scotland	3	2	5	3	.....	3
Spain .....	.....	.....	.....	1	.....	1
Switzerland	4	.....	4	1	1	2
United States	94	52	146	113	55	168
Unknown	14	1	15	11	1	12
Totals.....	253	93	346	232	96	328

SHOW

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Table No. 6.—Showing Occupations of Patients Admitted—Concluded.

OCCUPATIONS	From October 1, 1914, to September 30, 1915			From October 1, 1915, to September 30, 1916		
	Male	Female	Total	Male	Female	Total
Prostitute		1	1			
Physician	1		1	1		1
Plumber	1		1	1		1
Plasterer				2		2
Painter				4		4
Photographer				1		1
Pile driver	1		1	1		1
Pianist				1		1
Quarryman	2		2			
Railroad agent				1		1
Real estate dealer	1		1	2		2
Railroad man	1		1	1		1
Sailor	4		4	1		1
Saloon keeper				1		1
Shingle weaver	1		1	3		3
School teacher		1	1	1		1
Stenographer	1	1	2			
Student	1	1	2	2	5	7
Seamstress		1	1		1	1
Shoemaker	1		1	3		3
Steward				1		1
Steamfitter				1		1
Trained nurse		1	1			
Teamster	3		3	3		3
Tailor	1		1	2		2
Traveling salesman	1		1			
Telegraph operator				1		1
Tinner				1		1
Theatrical business man				1		1
Unknown	21	15	36	13	5	18
Woodsman	2		2	1		1
Waiter	2		2	3	1	4
Watchmaker	1		1			
Writer				1		1
Totals	253	98	346	232	96	328

Table No. 7.

SHOWING ASSIGNED CAUSES OF DISEASE.

CAUSES OF DISEASE	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
tion					1	1
ol	17	4	21	17	3	20
o-sclerosis	1		1	1		1
ery				6	1	7
fever	1		1			
ental	2		2			
ral hues	2		2	7	3	10
ation				1		1
ey	5	2	7	3	4	7
t		1	1			
le trouble		1	1			
itary	20	9	29	14	11	25
plegia					1	1
y				1		1
y to head	1	1	2	3		3
y to spine				1		1
the paralysis	1		1			
alth		1	1			
ion	2		2	3	1	4
urbation	12	2	14	10		10
line	1	1	2		1	1
ause		2	2		6	6
lgia	1		1			
ork	2		2	2		2
eral infection		3	3		3	3
ancy					1	1
on	2	3	5	1		1
y	3	3	6	6	5	11
lla	11	1	12	20	1	21
l prevert	1		1			
own	159	49	208	124	41	165
y	6	6	12	5	6	11
y over love affair	1		1			
y over family trouble	1	4	5	2	2	4
Totals	253	98	351	232	95	327

Table No. 8.
SHOWING FORMS OF MENTAL DISEASES OF PATIENTS
ADMITTED.

DISEASES	From October 1, 1914, to September 30, 1915			From October 1, 1915, to September 30, 1916		
	Male	Female	Total	Male	Female	Total
Dementia Praecox:						
Hebephrenic	88	23	111	31	19	50
Catatonic	19	7	26	6	2	8
Paranoid	18	7	25	13	7	20
Mixed	1	1	2	31	3	34
Defective Mental Development:						
Idiocy	1	1	2			
Imbecility, high grade	5		5			
Imbecility, low grade	1	1	2			
Constitutional inferiority	7		7	11	3	14
Epileptic psychoses	6	6	12	9	5	14
Manic-depressive Psychoses:						
Manic type	6	7	13	11	13	24
Depressed stype	20	12	32	6	22	28
Mixed type	4	5	9	6		6
Organic Dementia:						
Cerebral apoplexy	4	1	4	9	1	10
Cerebral syphilis	4	2	6	1	4	5
Arterio-sclerosis	2	2	4	1	1	2
Traumatic psychoses	2		2			
Posterior lateral sclerosis				1		1
Paranoia	1		1	10	1	11
Paresis	10		10	43		43
Symptomatic Psychoses:						
Huntington's chorea	2		2			
Toxic Psychoses:						
Alcoholic	16	4	20	13	1	19
Miscellaneous				2		2
Senile Psychoses:						
Pre-senile	7	1	8			
Senile	20	8	28	19	8	27
Presbyoprenia	1		1			
Involuntional melancholia	3	5	8		3	3
Infection psychoses	1	1	2			
Traumatic psychoses				3		3
Not insane	4		4	1	3	4
Totals	253	98	346	232	96	328

Table No. 9.

SHOWING AGES OF PATIENTS ADMITTED.

AGES	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
15 to 20 years.....	4	4	8	4	5	9
20 to 25 years.....	14	10	24	18	11	29
25 to 30 years.....	31	7	38	28	10	38
30 to 35 years.....	41	23	64	37	9	46
35 to 40 years.....	34	12	46	34	9	43
40 to 45 years.....	32	8	40	19	12	31
45 to 50 years.....	21	7	28	23	9	32
50 to 55 years.....	21	5	26	16	13	29
55 to 60 years.....	14	5	19	13	6	19
60 to 65 years.....	8	3	11	12	1	13
65 to 70 years.....	6	2	8	10	4	14
70 to 75 years.....	4	1	5	4	1	5
75 to 80 years.....	3	.....	3	5	4	9
80 to 85 years.....	.....	.....	.....	2	1	3
85 to 90 years.....	.....	.....	.....	.....	.....	.....
90 to 95 years.....	.....	.....	.....	1	.....	1
Unknown.....	20	6	26	6	1	7
Total.....	253	98	351	232	95	327

Table No. 10.

SHOWING AGES OF PATIENTS WHO DIED IN HOSPITAL.

AGES	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
15 to 20 years.....	.....	.....	.....	1	.....	1
20 to 25 years.....	.....	.....	.....	1	1	2
25 to 30 years.....	.....	.....	.....	3	1	4
30 to 35 years.....	5	.....	5	10	2	12
35 to 40 years.....	2	1	3	6	2	8
40 to 45 years.....	4	.....	4	6	1	7
45 to 50 years.....	4	2	6	6	5	11
50 to 55 years.....	.....	1	1	5	4	9
55 to 60 years.....	.....	.....	.....	7	4	11
60 to 65 years.....	1	.....	1	2	2	4
65 to 70 years.....	.....	1	1	4	2	6
70 to 75 years.....	2	.....	2	3	.....	3
75 to 80 years.....	.....	.....	.....	4	2	6
80 to 85 years.....	.....	.....	.....	.....	.....	.....
85 to 90 years.....	.....	.....	.....	1	1	2
90 to 95 years.....	.....	.....	.....	1	.....	1
Unknown.....	3	.....	3	3	.....	3
Total.....	21	5	26	62	27	89

Table No. 11.
SHOWING CAUSES OF DEATH.

CAUSES	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
Arthritis deformans	1		1			
Acute manic exhaustion.....		1	1			
Atheronia					1	1
Atheromatous degeneration				3		3
Aortic regurgitation				1		1
Aortic stenosis				1		1
Bronchorrhea				1		1
Burns of face, neck and chest.....				1		1
Chronic intestinal gastritis.....	1		1			
Chronic parenchymatous nephritis.....	1		1	1		1
Cerebral apoplexy		1	1			
Cerebral embolism	1		1			
Cerebral hemorrhage				4	2	6
Chronic valvul				1		1
Cancer of uterus.....					1	1
Chronic bronchitis				1		1
Carcinoma of stomach.....					1	1
Cerebral syphilis				1	1	2
Chronic endo-myocarditis	1		1			
Dementia et exhaustion.....	4	1	5	2	7	9
Diabetes	1		1			
Double strangulated hernia.....				1		1
Erysipelas				1		1
Epileptic convulsions						
Epilepsy, exhaustion from.....				2		2
Edema of larynx.....				1		1
Epithelioma with metastasis.....					1	1
General paralysis	2		2			
General paresis				13		13
Luetic epilepsy				1		1
Mania et exhaustion.....	2		2	3	2	5
Melancholia et exhaustion.....		1	1			
Mesentric embolism					1	1
Organic dementia				1		1
Perforation of pleura.....				1		1
Pyelo nephritis				1		1
Pulmonary hemorrhage				1		1
Pneumonia, broncho				2	2	4
Pneumonia, lobar	2		2	7	3	10
Sarcoma over left parietal region.....				1		1
Tuberculosis, pulmonary	4	1	5	8	4	12
Unknown (died on parole).....	1		1			
Totals.....	21	5	26	62	26	88

Table No. 12.

FOLLOWING NUMBER OF ATTACKS OF PATIENTS ADMITTED.

ATTACKS	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
.....	109	47	156	108	56	164
.....	28	16	44	29	13	42
.....	5	2	7	8	6	14
.....	2	.....	2	3	1	4
.....	2	3	5	2	1	3
.....	.....	.....	.....	.....	1	1
.....	107	25	132	82	16	98
Total.....	258	98	346	282	96	328

Table No. 13.

SUMMARY.

	Year Ending September 30, 1915			Year Ending September 30, 1916		
	Male	Female	Total	Male	Female	Total
Patients in hospital at beginning of term.....	199	98	287	398	177	575
Admitted from Western State Hospital, Fort Steilacoom	108	58	221	1	1	2
Admitted from Eastern State Hospital, Medical Lake .....	.....	.....	.....	.....	1	1
Admitted from Washington State Re- formatory, Monroe .....	.....	.....	.....	2	.....	2
Admitted	85	40	125	229	94	323
Total in hospital during term.....	392	191	583	630	273	903
Patients discharged—Recovered	13	6	19	46	21	67
Patients discharged—Improved	7	1	8	15	2	17
Patients discharged—Unimproved .....	.....	1	1	3	2	5
Patients deported .....	.....	.....	.....	17	2	19
Patients discharged—Not insane .....	.....	.....	.....	4	2	6
Patients died	21	5	26	62	27	89
Transferred to Eastern State Hospital....	3	.....	3	1	1	2
Transferred to Western State Hospital....	.....	1	1	3	3	6
Number of vacancies created.....	45	13	58	161	60	211
Number of patients remaining at the end of the term.....	.....	.....	575	.....	.....	691

STATE INSTITUTION FOR FEEBLE MINDED.

MEDICAL LAKE, WASHINGTON.

For the Biennium Commencing October 1, 1914, and Ending September 30, 1916.

MEDICAL LAKE, WASH., September 30, 1916.

Hon. State Board of Control, Olympia, Washington.

GENTLEMEN: In accordance with the law, I have the honor to submit the report of this institution for the period commencing October 1, 1914, and ending September 30, 1916.

The following is the movement of population for the two years:

	Male	Female	Total
Present Oct. 1, 1914.....	126	126	252
Admitted Oct. 1, 1914, to Sept. 30, 1916.....	239	148	387
Readmitted during the same period.....	23	25	48
Total enrollment for the period.....	388	299	687
Discharged during the two years.....	67	37	104
Died during the period.....	20	18	38
Eloped	5	1	6
Total vacancies created.....	92	56	148
Present Sept. 30, 1916.....	296	243	539
	388	299	687

A large proportion of the discharges reported above, as well as the readmissions, are for inmates that go home during the summer vacation, or for short visits. All that leave and do not return before the first of the following month are discharged and dropped from the rolls. Most of them return when there is room or will likely return at some future date.

The five new buildings nearing completion at the time of my last biennial report, were completed and the boys moved into them January 13, 14 and 15, 1915. As there were about 200 applicants on the waiting list at that time, the opening of the new buildings was the occasion for a very heavy increase in our population. From January 20th, to 31st, we admitted 99.

We only had 252 inmates at the beginning of the period, October 1, 1914, and during the two years past have admitted and readmitted 435 and the number of inmates now present is 539.

With such a great increase in so short a time, it has been considerable of a task to get them classified and organized under the new conditions, particularly as we occupy two institutions a mile and a quarter apart. But these difficulties are fast being overcome and the work established on a good basis.

FINANCIAL.

At the time of my last report, Sept. 30, 1914, the unexpended balance for maintenance for the fiscal period ending March 31, 1915, was

	\$58,003 54
Expended of this from Oct. 1, 1914, to March 31, 1915	38,382 76
Leaving an unexpended balance, which lapsed into the treasury, of	\$19,620 78
The balance of the appropriation for buildings, water, sewerage, furniture and improvements, amounted to \$51,445 52 and was all expended before March 31, 1915.	

The following appropriations were made by the Legislative Assembly of 1915:

Maintenance	\$210,000 00
Buildings, central heating plant, laundry, fencing, equipment, etc.	296,000 00
Purchase of land	16,000 00
Of the appropriation for maintenance, for the present fiscal biennium ending March 31, 1917	210,000 00
We have expended to date the sum of.....	181,710 26
Leaving a balance available for the next six months of..	\$78,289 74

I estimate that our expenditures on this account for the next six months will be approximately \$64,000.00, which will leave a balance unexpended from the Maintenance Appropriation, of about \$14,000.00

We based our estimate for the present biennium on 500 inmates at .57½ cents per day per capita. As the buildings were not opened as soon as expected, our daily average attendance did not reach 500 and we have been able to keep the per capita cost below 57½ cents.

The average daily attendance for the institution biennium has been 438.419 and the daily per capita cost for maintenance has been but .5307 for the period.

BUILDING APPROPRIATION.

Of the building appropriations of.....	\$296,000 00
We have expended the sum of.....	229,344 43

Leaving a balance unexpended at this date of..... \$66,655 57

which will be expended within the next two months under existing contracts and liabilities.

With this money we have done an enormous amount of building, consisting of an administration building with a large rear annex for the culinary department, central heating plant and concrete smoke-stack, laundry, custodial building and two cottages.

The administration building is practically a four story structure, although a broad flight of concrete steps leading from the ground to the main floor gives it the appearance of three stories and basement. The dimensions of the main structure are 131x48. Until a separate school building is provided, the basement is arranged for the girls school department and consists of one large general school room and

four good sized class rooms, toilets, entrance hall and corridor. A concrete stairway leads to the main floor above and there is also an entrance from the outside.

The main entrance leads from a large veranda into a spacious vestibule and thence into a handsome octagonal rotunda, extending for the present through the second story, but framed so that it can eventually be carried through to the dome, if desired. Opening to the right is the general information office, in which is the stenographer, telephone switchboard and postoffice. To the north, on one side of a broad corridor are the offices for the physicians, record room and superintendent. On the other side of the corridor are the offices of the steward and accountant, clerk, dispensary and matron. To the south of the rotunda, on one side of the corridor is the reception room for visitors and the library and on the other side, the officers dining room, pantry and closets, and passage way to the rear annex. Off the rotunda there is also a passage way to the rear entrance, toilets, a fireplace and marble stairway leading to the floors above. The lighting of the rotunda and all rooms and halls is excellent, there being an abundance of daylight everywhere. On the next floor are the living rooms of the Superintendent and Board of Control. The entire upper floor is at present arranged as a large assembly hall, with a stage in one end, for the entertainment of the inmates and for chapel services on Sunday. At one end is a large iron fire escape. There are also small retiring rooms, toilets and dressing rooms. Sometime in the future, when a separate auditorium and gymnasium is provided, this floor can easily be converted into apartments for officers and teachers, the same as the floor below, to meet the future requirements, as the institution grows. There is no wood used in the construction of this building, except the doors, windows and maple floors laid on reinforced concrete. To the rear of the main structure is a corridor leading to a two story building 72x35. On the first floor is the bakery, staff kitchen, pantries, toilets and bread room. On the second floor are apartments for officers. This floor is also connected by a corridor with the second floor of the main building. Connecting with this annex, to the rear, is a one story structure 72x75, in which is the kitchen, employes' dining room, kitchen storeroom, scullery and vegetable room. To the rear of this is a one story building 43x191, containing two large dining rooms and pantries for the inmates. A broad, well lighted corridor runs from the main building through all these annexes, from which the various rooms described open, the administration and the annexes being virtually one building. This building, the power house and cold storage building when erected, will form the dividing line between the sexes.

The girls' custodial building consists of a central structure 38x138, with two wings each 114x43, being two stories high and having a total frontage of 266 feet. It is a duplicate of the one erected two years ago, except that instead of having stairways leading to the dormitories on the second floor, we have provided inclines, so there will be no

danger of the weak and epileptics falling down stairs. Entrance to the dining room from the wards is from the corridors instead of from the centers. Dormer windows are also built in the roof, affording light and ventilation in the attic. This building will accommodate 120 inmates, besides affording rooms for about 18 employees.

The two cottages are each 94x66, two stories high. The exteriors are the same as the three built two years ago, except that there are dormer windows in the roof to light and ventilate the attic. The interior arrangement however, is entirely different and I think a great improvement over the boys' cottages. They each hold 77 beds and are well equipped with fine, large living rooms, clothesrooms, baths, toilets, cloakrooms, etc.

The laundry consists of a one story section 28x42 for an ironing room and is equipped with a 100 inch 4 roll flat work ironer and four adjustable ironing boards. The rear section is 28x62 and will be equipped with 2 brass washers, extractor, drying tumbler, dryroom and soap tanks. Also a sorting room. These rooms are light and airy and well ventilated.

Two steam aluminum kettles of 100 gallons capacity each and a battery of large coffee and tea urns have also been ordered and will soon be installed in the kitchen. A large brick oven has been built in the bakery.

The boiler house is 56x54, one story, about 19 feet high and the concrete smokestack, now building, will be 66 inches inside diameter, and 150 feet high above grade, anchored in a concrete block reinforced, 8 feet deep and 19 feet square.

From the boiler house to each of the new buildings, runs a concrete underground tunnel, in which is carried all the steam mains and returns, hot water pipes, water supply and electric wires, thus doing away with all concealed and buried pipes. Everything is in sight, where leaks can easily be discovered and repaired. We are just completing 1,000 feet of this tunnel. The main tunnel is 6½x6½ and the laterals 4x4½ inside. Being twelve feet deep in places, it required the removal of a large amount of earth. Teams could not be used and it all had to be excavated with picks and shovels. The boys and attendants did the major part of this work and our teams hauled the sand and rock, thus saving over \$2,000.00 in the cost of this work.

The vacuum system of heating will be used. Steam will be carried on the mains in the tunnel at a pressure of 20 to 30 lbs. and reduced to low pressure at each building, which I believe will give greater efficiency, besides allowing the use of smaller steam mains.

In the boiler house there are two 150 h. p. and 175 h.p. tubular boilers. There are also two large steel hot water tanks, of sufficient capacity for all domestic uses. In the laundry is another hot water tank, independent of the main supply, but which is heated with steam from the main plant. The vacuum pump sets in a pit 12 feet deep in

the boiler house, so that there is a gravity fall and no lift for the vacuum pump on the returns.

The administration building and all two story structures have green tile roofs. One story buildings have patent built up asbestos covering, guaranteed for ten years. All walls are brick on concrete foundations and partitions are of hollow tile. Except in rear annex and basement, floors are maple laid on reinforced concrete. Kitchens, bakery, toilets and bathrooms have terazza floors. Other floors in the rear annex are cement, finished red. Corridors, stairways, baths, toilets and day-rooms are wainscoted five and six feet high with Kellastone, which seems to be proof against the destructive class we have to care for here.

Everything about the buildings is plain, but substantial looking, and restful and homelike to the eye. The material and workmanship is of the very best. The full beauty of the architecture and arrangement of the village, will not become apparent for some years, when the additional units shall have become completed, the park system and roadways laid out and the trees grown sufficiently to relieve the present bareness. It will take some years hard work, but no great expense to get the grounds in order, the principal expense being for the permanent walks and surfaced roadways.

The appropriation of \$16,000.00 was made for the purchase of about 160 acres of land known as the Zeigler farm, lying between the buildings and a tract we own on the south shore of West Medical Lake. It was necessary that we secure this land for a right-of-way for the sewer line. Besides this, it is nearly all excellent agricultural land and it would only be a question of time when we would have to have it. I thought the price high at the time, but am now convinced of the wisdom of the purchase. We are now farming it and took off a good crop from it this year, of hay, grain and potatoes.

The question of sewage disposal has been a perplexing problem. All the surface water contiguous to the new site drains into Clear Lake, from which is obtained the water supply for the Eastern Hospital, this institution and the town of Medical Lake. Immediately to the west of the buildings rises a high range of hills, the melting snow from which causes heavy freshets to come down past us at certain seasons, carrying the effluent from our septic tank across neighboring farms below and thence into Clear Lake. While our system of septic tank, filter bed, aerating basin and a surface ditch 1,000 feet long, purifies the sewage effluent before it leaves our premises, it is not comforting to any person who is compelled to drink the water from Clear Lake, to know that the sewage flow from an institution of several hundred inhabitants, is eventually finding its way into the water supply, no matter how pure it is. During the dry season we have been able to care for the overflow by using it for irrigating, by seepage and evaporation. But in the wet season and the spring thaws, it cannot be

controlled. In order to be sure that the water supply was not being contaminated, I had an analysis made and received the following report:

ANALYSIS OF WATER FOR F. M. SCHOOL.

Sample taken from an open ditch, April 22, 1916.

Representing the sewage stream from the Boys' F. M. School, after sedimentation in a soil basin and the passage of the outcoming water through a ditch some 1,000 feet long.

Water greenish due to green algae; which settles to bottom of container in a few minutes.

Number of Bacteria per 1 c. c. 1800

Intestinal organisms (B. Coll) present in 10 c. c.; absent in 1 c. c.

This would pass the Am. Pub. Health Assn. standard for drinking water of poor quality. Many wells do not furnish water as good; aside from algae the water contains at this season.

(Signed) H. A. FELDER,

Laboratory of E. H. S. I.

Nevertheless, some of this water, during the season of freshets, finds its way into Clear Lake. Suits have been threatened and frequent complaints have been made by land owners across whose land the water runs.

I secured the services of an engineer and had a line run to West Medical Lake. The elevation was found to be sufficient to utilize that lake for disposal of the surplus water, but owing to a rock cut over twenty feet deep and about 1,000 feet long, through a high rock dike to the north the cost of this sewer line was estimated to be \$17,940.00, which, in the absence of funds was prohibitive.

I then found that by running a line from the outlet of the septic tank, which disposes of all solids, we could use the low gradient of 3 inches in 100 feet and get fall enough to empty into the Lake, and escape for the present, the costly rock cut, by building a wooden flume around the rock bluff, which we have done and are now constructing the line across the Ziegler farm. We had no appropriation for this purpose, but in view of the grave emergency, felt justified in paying for this work from the maintenance fund. So far, most of the excavating has been done by the boys, but we will have to hire some help in order to complete the work before winter.

IMPROVEMENTS.

Besides the construction of the tunnel and sewer line mentioned, many other improvements have been made, among which are the following:

The differential drainage system on the steam returns in the north and south cottages at the girls' school was causing damage to the floors from escaping steam, these being under the floors. New concrete pits were constructed outside the buildings and the apparatus removed to

these pits by the engineer. The fences on all the land purchased the past few years were all in bad order. Much of this has been repaired and much new fencing built.

The old barn on the Zeigler farm has been practically rebuilt and now stalls 12 head of horses.

A substantial stone roothouse 28x60 feet and 9 feet deep has been built, with cement floor and roof and vegetable bins have been constructed. All the excavating and much of the other work being done by the boys and attendants.

A new orchard of about 800 trees has been set out and a large part of the small fruit bushes transplanted from the old site to the new.

The boys have filled in quite a large tract of land in front of the boys' custodial building and also done much grading elsewhere.

Sludge pipes were put in to drain the septic tank when necessary and a large earth dam built below the filter bed to make an aerating basin. Also about 1,000 feet of ditch dug below the dam, for an irrigation head and for further purification of the water.

Fly screens were made for four new buildings built two years ago.

The steam returns, which were under the floors in the north and south cottages at the girls' school, leaked so badly that some of the floors were being damaged. New returns were put in by the engineer on top of the floors and boxed in.

About 80 shade trees were planted along the proposed parkway fronting the boys' cottages.

Large quantities of stones and boulders have been gathered up from the grounds by the boys and much clearing done.

New sanitary springs have been put on about 180 beds in the girls' division, on the old beds, and the ladies are now painting the beds with white enamel, preparatory to moving to the new buildings, as we expect to take all our old furniture with us and renovate it as far as possible.

Much work has been done on the road from the new site to Medical Lake and all the sand, rock and gravel hauled for the tunnel, roothouse and other concrete work.

About 1,500 feet of 10 inch sewer was laid, with concrete manholes every two or three hundred feet and about 1,700 feet of 8x10 flume constructed.

A concrete box was built at the end of the septic tank, to divert the flow either to the new sewer line or to the aerating basin.

Several hundred feet of trenches have been dug for laying drains from the downspouts of the new buildings. Concrete sewer pipe is now being made for this purpose.

A large amount of repair work and improvements has been done by the engineer, besides much installation of apparatus and fixtures in the new buildings, which were not provided for in the contracts.

Twenty to thirty of the boys and attendants have been actively engaged in work on the farm and garden and with the teams and coal wagons.

The ground around the buildings has been platted and a topographical survey and cross section made, showing the elevation every 25 feet. Also parks and roadways platted.

Six horses and two wagons were purchased as well as considerable farm machinery.

There is considerable first class land in the tracts purchased the past few years, but it will be a year or two before it is in good order, having been neglected for some years and grown to mustard, wild oats and other weeds. The garden land is first class and produces enormous crops. I think we will have about fifty acres that will produce timothy or alfalfa. We are experimenting with alfalfa so far with good success. If we can raise alfalfa, it will mean a large saving when we get a dairy herd. We have about 200 acres of good grain land, which has produced good crops the past two years. As we have no stock as yet but some horses. We have had our surplus wheat ground into flour, which is of material assistance in reducing our maintenance expense.

Our most urgent need now is a dairy barn and silos. It is getting to be a difficult matter to get good milk here at a reasonable price. For the past ten years, I believe there have been but four occasions when competitive bids have been received for milk. We require such a large amount that there are but few dairies equipped to supply us. The cost of our milk will soon be in the neighborhood of \$6,000.00 per annum and I believe with a good dairy barn and herd of cows and silos, we could save one half this amount, as we will soon be able to raise a large portion of the feed for the cattle.

We are now raising practically all the vegetables consumed except when some seasons there is a failure of some particular crop. For instance, last year there was a short potato crop and this year the corn is almost a total failure. Potatoes here are almost always late and we always have to buy during July and August, as our old stock does not keep after June.

Many of the boys are being trained for farm work and from now on we will have better farm help. Considering the short time we have engaged in farming and with all the other work that has been going on the past two years, I think the record made by the boys on the farm during the biennium is very gratifying, showing, as it does, farm products raised of the value of \$6,703.99.

I hope that in addition to the dairy we can get some poultry houses and pig pens started, which we can increase as we find we can raise the necessary feed.

We have altogether about 640 acres of land, the classification of which will be found in the accompanying tables.

THE NEW SITE.

During the closing hours of the last Legislative session, there was practically a unanimous opinion that the two institutions should be consolidated and the building of one turned over to the Eastern Hos-

pital. In fact, an appropriation of \$2,500.00 was granted the Eastern Hospital for the purpose of remodelling the buildings at the girls' school to suit the requirements of the Hospital. But afterwards a difference of opinion developed, as to whether we were to retain the old buildings or the new. The appropriation bill as passed, provided that the new building to be erected should be according to plans and site approved by me. My views in that respect were fully set forth in my last biennial report. The only cause I would have for changing my mind, would be the question of sewage disposal.

I called in consultation Mr. Julius Zittel, architect and Mr. Otto Welle, civil engineer and Mr. Warren Truitt, our institution engineer. Mr. Zittel being an architect of acknowledged repute, Mr. Welle, being at one time city engineer of the city of Spokane and Mr. Truitt a competent engineer and mechanic by reason of being employed here, well acquainted with the working conditions. They all agreed with me that the new site while not as desirable as the old, could be made suitable for our purposes. That there was sufficient building area and that a sewage plan could be worked out so that the flow would not reach the water supply at Clear Lake.

I then took into consideration the following facts: That this institution would soon be one of the largest in the State and that by reason of its close proximity to the Eastern Hospital, the future growth and efficiency of both would be hampered; that the new buildings just completed at an expense of about \$240,000.00, including the sewage and water system, were constructed for the care of this particular class; that if the new buildings were turned over to the Hospital, they would be confronted with the same difficulty we now have, of conducting two institutions a mile and a half apart, besides another farm colony they already have about three miles to the northwest; that the buildings on our old site are only about 1600 feet from the Hospital and the natural expansion of that institution must be in this direction, so that eventually there will be but little space between the Hospital and the buildings the girls now occupy, and these buildings can be converted at small expense to accommodate certain classes of the insane.

While the new site is more remote from the transportation lines than the old, this can be remedied to some extent. There is a tract of 160 acres of practically worthless scab land which belongs to the Hospital. This tract is surrounded on three sides by land belonging to the school. If we can get a right-of-way across this land for a road, it will cut off about half a mile of the distance between the new site and Medical Lake. This road would be free from any heavy grades and with a good macadam road and a motor truck, the question of the transportation of fuel and other supplies would be solved.

So, taking everything into consideration, I feel that the best interests of the State and its two institutions have been subserved by erecting the building now under construction, at the new site. I am confident that this opinion will be concurred in by any one fully

conversant with the conditions existing. Your Board, the Bureau of Inspection, and many citizens who originally opposed the removal, now agree that as a business proposition, the proper thing to do was to erect the new buildings at the new site, and this has been done.

A vast stride forward has been made in providing for the care of the feeble minded in this State, of whom there are probably not less than 1200. In less than four years an entirely new institution consisting of eleven substantial, modern, fireproof buildings have been erected, which will accommodate about 615 inmates. I have visited several of the leading feeble minded institutions in the United States, and while I have seen some that are more imposing and surrounded with beautiful parks and grounds I am satisfied that in a few years, none will excel ours in beauty, convenience, comfort and permanence. In laying out the plans, we have endeavored to anticipate the future and provide for an eventual population of 1,500, so that no part of the work will have to be torn down to make room for additions. Ample space has been left for such additions as may become necessary from time to time and for parks, playgrounds and roadways. The administration building, the kitchen, employes' and officers' dining rooms are large enough for all time to come. The inmates' dining rooms are now completed are of sufficient capacity to accommodate about 1200 inmates and can easily be added to if necessary. As will be seen by the accompanying picture, the institution has been laid out on the village plan and hereafter additional units can be added as required, without crowding or disarranging the present system. While there may be some criticism against building such a large administration and culinary department at this time, I am fully convinced that time will prove the wisdom of this measure. During twenty years of institutional work I have had the opportunity to observe the folly and waste of building only for the present and in not anticipating future requirements.

As nearly as I can judge at this time, the work done and materials entering into the construction have been first class and the state has received full value for its expenditure. I am advised that the buildings could not be duplicated except at an advance of about \$65,000.00 above what they have cost.

Several thousand dollars worth of work has been done by our inmates and employes in improvements we could otherwise not have had through lack of funds. There has been so much to do that we have been unable to do much grading yet and the surroundings will be disagreeable and inconvenient the coming winter and we will have hard work to take care of the surface water. But before another season we will be able to provide for this.

DEFECTIVE DELINQUENTS.

One of the problems now before us is what to do with our defective delinquents. These are in a class by themselves. For the past four years the authorities have been sending them here, because they do

not know what else to do with them. The law does not allow them to be sent to the reformatory until they commit a crime. Most of the older ones are criminalistic in their tendencies and delight in plotting and trouble making. Some of the women have led immoral lives and see nothing wrong in it. Some have had affairs with immoral men, who seek to keep up the acquaintance by correspondence after the girls have been sent here and make every possible effort to secure their release. Strange as it may seem, the parents of some of these women join in these efforts and employ attorneys to aid them. Petitions have been signed by reputable citizens in some communities and sent to the Governor, asking that some of these be discharged.

Last year one of the girls ran away one evening after supper, and by previous arrangement met a man waiting close by. They went to Cheney, boarded a train for Oregon, where they were married. Afterward, upon returning to this state, the authorities arrested the woman and she was recommitted here by the court. Since then we have had to employ an outside guard, who is a deputy sheriff, with power to make arrests if necessary.

There should be a law making it a felony for any person to aid or abet an inmate of any state institution to escape or elope, and a misdemeanor for any one caught loitering around the buildings and grounds without due authority or permission. The sheriff of any county in which a state institution is located, should be required to appoint one of the regular employes of such institution, recommended by the Board of Control or superintendent, as a deputy sheriff, with power to make arrests and enforce the law when necessary, under the direction of the superintendent.

True defective delinquents cannot be reformed and psychologists and court officers recognize the futility of sending them to the reformatory for that purpose. Except while under custodial care, they are always in trouble and a menace to the community in which they reside. Many make great improvement under good surroundings and strict supervision but almost invariably relapse when turned out into the world again. We have very little trouble with those having these inherent traits when sent here while they are young. But after fifteen or sixteen years of age, habits and temperament have been formed toward an evil disposition which is difficult to control and impossible to eradicate. These are the trouble makers. In machination and intrigue some of them would puzzle a skilled detective. Nevertheless, with all their faults they are interesting and arouse our sympathy when we realize that they are not responsible for the evil that is a part of their nature.

It is an open question yet whether those of this class who are over 18 years of age should be kept here, or a separate division arranged for them at one of the reformatory institutions.

PRESERVATION OF GAME.

I recommend that a law be passed declaring all state land belonging to state institutions shall be game preserves and that it shall be a misdemeanor for any person to discharge or have in their possession, firearms or other weapons or contrivances for killing or taking game, on such premises or within 500 feet from the boundaries of the same or any waters on or bordering the same. There are excellent breeding grounds about here for game birds to breed, if protected, and the passage of such a law may prevent some of our inmates and employees from being killed or seriously injured by the indiscriminate shooting by numerous sportsmen who pay no attention to the "No Shooting" signs that have been posted.

GENERAL HEALTH.

Many of the inmates received during the rush of January and February, 1915, were extremely weak and debilitated. Two were almost in a dying condition when they arrived, the long journey in cold weather and sudden change in altitude being hard on such weak cases.

We have had epidemics of chickenpox, mumps, la grippe and whooping cough, but all so afflicted made good recovery. Have also had a number of cases of mild intestinal and stomach trouble. At the present time the general health of the inmates is excellent. We have a great many epileptics, who are treated with varying degrees of success.

Through the courtesy of Mr. Felder of the hospital laboratory 176 tests were made by the Noguchi modification of the Wasserman reaction. Also a number of blood counts made as well as tuberculin tests.

Some time in the future we hope to have a laboratory equipped and give more attention to research and clinical work.

The state dentist visited us about two months during 1915 and did the dental work required for all the inmates then present. We look for him again this winter. I presume his report will be made direct to you, hence do not include it here.

SCHOOL DEPARTMENT.

Notwithstanding the large number of new admissions and the unsettled conditions that have prevailed, gratifying results have been obtained by the teachers in charge of the school department. Classes in kindergarten, sense training, courses in the English branches up to the sixth grade, basketry, carpentry, lace making, embroidery, sewing, rug and carpet weaving, shoe repairing, farming and gardening, drawing and painting, physical culture and music are a part of the regular curriculum. Much of the industrial work compares favorably with that done in the public schools.

Every fall about 300 of our inmates spend a day at the Interstate Fair in Spokane, which is always a great event for them.

Once a week there is dancing, music and moving pictures in the assembly hall and chapel services on Sunday morning.

Holidays are appropriately observed and at Christmas time several entertainments are provided during the week, including the Christmas trees.

Through the courtesy of Senator Hallett, who owns the beautiful bathing beach at the south end of Medical Lake, the children are permitted to bathe in the lake during the hot summer months and they certainly appreciate his kindness.

The boys have a good baseball team and give some exciting exhibitions of the national game.

REQUIREMENTS.

I estimate that the appropriations necessary for the next biennial period commencing April 1, 1917, and ending March 31, 1919, will be as follows:

Maintenance 670 inmates at 55 cents per day per capita.....	\$269,005 00
Two annexes to custodial buildings.....	80,000 00
Furniture	3,000 00
Material for poultry houses and pigpens.....	1,000 00
Dairy barn and silos	12,000 00
Cold storage equipment.....	3,500 00
Pipe and fittings for connecting five buildings with central heating plant	5,000 00
Material for north tunnel and laterals.....	3,000 00
Shop annex to boiler house and cold storage building.....	7,000 00
Material for window screens.....	500 00
Coal bunkers	1,500 00
Filter bed at West Medical Lake.....	700 00
Walks, roads and grounds.....	2,000 00
Apparatus for kitchen, bakery and dining rooms.....	1,000 00
Combination woodworking machine	350 00
Lathe	500 00
Total.....	\$390,055 00

Maintenance. I estimate the average daily attendance for the next biennium at 670 and the daily per capita cost at 55 cents per day. The present allowance is 57½ cents per day, but I am satisfied that we can get through on 55 cents.

Two Annexes to Custodial Buildings. Our present population is 539 and there are 70 on the waiting list—37 males and 33 females. Our capacity when the new buildings are completed will be 615. So it is evident that we will have enough to fill the buildings as soon as they are opened. The two annexes asked for will accommodate 120 more, bringing our total capacity up to 735.

Furniture. We will need some furniture for the administration building and to equip the two annexes, as well as the quarters for help.

Material for Poultry Houses and Pigpens. I think that \$1,000.00 will purchase enough material for us to get a good start with poultry and hogs. I have not had time to lay out this work yet but am very anxious to make a start at it next year.

Dairy Barn and Silos. I have visited a number of successful modern dairies and believe that we can erect a good barn and one or two silos for the above amount. We have rock enough here and can haul our own sand and gravel, hire some stone masons and carpenters and get a first class barn for that amount, sufficiently large, I hope, to hold 60 cows, with a large hay loft above.

Cold Storage Plant. The \$3,500.00 for this purpose is for a 12 or 15 ton compressor, piping, brine tank, etc. This is an absolute necessity and must be in before warm weather.

Pipe and Fittings for Connecting Five Buildings With Central Heating Plant. This is for connecting the five buildings erected two years ago with the central heating plant. At present the buildings each have a separate heating plant, which is unsatisfactory. The engineer has to walk several miles daily, going around to the various buildings to look after the heaters, which leaves him no time for repair work. These plants are also expensive to keep up.

Material for North Tunnel and Laterals. This is to carry the pipes and wires from the five buildings to the central heating plant. The buildings now being constructed have connecting tunnels and it is desired to have all the buildings thus connected. Most of the excavating will be done by our regular force and the inmates.

Shop Annex and Cold Storage Building. There is no shop for repair work and tools and no cold storage for keeping the milk and meat. I am satisfied that we can erect the two buildings for \$7,000.00 by purchasing the material and erecting them by day labor.

Material for Window Screens. We have no funds to provide the windows on the new buildings with window fly screens, which are of course very necessary before hot weather comes again.

Coal Bunkers. There are no coal bunkers or sheds for the new power plant and we are planning on building concrete bunkers in the rear of the boiler house.

Filter Bed. This is for further purifying the sewage before it is emptied into West Medical Lake. It will consist of a cement platform with side walls about 18 inches high, filled with broken rock.

Apparatus for Kitchen and Bakery. It is impossible to get along now without a bread mixer, meat cutter and other kitchen apparatus.

Combination Woodworking Machine. This machine will be a great labor saver in construction and repair work and will soon pay for itself.

Lathe. This is a lathe for tooling steel, by which repairs and new parts may be made for machinery, shafting, etc., and save sending to the city for numerous repairs.

We have no state architect and I have not had time to prepare plans and bills of material for the above improvements, nor can it be done on works of major construction under contract. When bids were received for the buildings now under construction, there was a difference

of \$70,000 between the highest and lowest bidder. These figures were made by men who are experts in figuring the cost of construction, and it shows how impossible it is to make detailed estimates for construction work, particularly for a year in advance. We can only ask for what we consider is absolutely necessary, in the light of past experience, and if we have figured too low, do as we are doing now,—cut out some of the work to bring it down to the amount allowed and do it with our regular force. If we have figured too high and the cost of material and labor drops, there will be a surplus, which will revert to the treasury.

There has been some agitation regarding the building of another institution on the West Side. It is argued that about two-thirds of our inmates are from that district and the great distance makes it excessive for transportation and prevents the parents from visiting their children.

While it will unquestionably be necessary to have another institution on the West Side some day, I have opposed any move in that direction until we have a complete unit here at the present institution. Until we have 1,000 inmates we cannot have buildings enough to allow proper segregation of the various grades and it would be bad policy to start another school until we have completed this one and established it on a good working basis. It must be remembered, that in less than four years the state has built an entirely new institution to accommodate 615 inmates and it is hardly reasonable to ask that another one be built until the present one is occupied and completed according to the program that has been laid down.

It might be well at the first session of the Legislature when the demands for appropriations are not so heavy as they have been for the past few years, to provide for the selection and purchase of a site and the erection of a cheap temporary building, which could afterward be used for other purposes. A colony of working boys could later be sent from here to clear, grade and prepare the land for the future buildings. If this is ever done there should be not less than 1,000 acres secured, with ample water supply and good drainage and transportation facilities. However, from all reports I judge there will be the usual heavy demands for appropriations at the next session and consideration of this matter will have to be postponed, as public opinion has about reached a stage now where it insists upon calling a halt on appropriations for new projects and for confining the aid of the state to the completion and economical operation of existing institutions.

CONCLUSION.

During the past year we were honored by visits from Dr. Rogers, superintendent of the Minnesota institution for feeble-minded, Dr. Kutnewski of the South Dakota, and Dr. Fast of the Nebraska institutions. Many state, county and other officials and educators have called to see us and we have been greatly encouraged by their kind expressions of confidence and good cheer.

Contributions of money, clothing, Christmas gifts, fruit and other things that add to the comfort and happiness of our inmates, have been so numerous that it is impossible to mention the names of the donors in this report. Last Christmas one society in Spokane and one firm there, each sent a gift for every inmate here. Our amusement fund, which is derived from contributions of our friends, permitted us to purchase a fine billiard table for the boys. Prior to this period, we have been able to purchase with this fund two good Victrolas, many records, and a first-class moving picture machine, besides providing Christmas gifts for those not otherwise provided for. An electric piano was also contributed a few weeks ago. To all who have contributed to the welfare and happiness of our inmates, we desire to record our heartfelt thanks.

The past biennium has certainly been a notable and busy period. It is only by the strenuous, united efforts of our inmates, employees and officers that so much has been accomplished. It is with a deep sense of gratitude that I record my appreciation of their successful efforts.

To you, gentlemen, I am indebted for your confidence, good advice and steadfast support.

Respectfully submitted,

S. C. WOODRUFF, *Superintendent.*

Table No. 1.

Movement of Population from October 1, 1914, to September 30, 1916.

YEAR ENDING SEPTEMBER 30, 1915	Male	Female	Total
Present October 1, 1914.....	126	126	252
Admitted October 1, 1914, to September 30, 1915.....	158	98	246
Readmitted during year.....	15	11	26
Total enrollment for year.....	294	230	524
Discharged October 1, 1914, to September 30, 1915.....	26	16	42
Died during year.....	9	8	17
Eloped during year.....	4	.....	4
Total vacancies created.....	39	24	63
Present September 30, 1915.....	255	206	461
	294	230	524

Movement of Population for Year Ending September 30, 1916.

YEAR ENDING SEPTEMBER 30, 1916	Male	Female	Total
Present October 1, 1915.....	255	206	461
Admitted October 1, 1915, to September 30, 1916.....	86	55	141
Readmitted during year.....	8	14	22
Total enrollment	349	275	624
Discharged October 1, 1915, to September 30, 1916.....	41	21	62
Died during year.....	11	10	21
Eloped during year.....	1	1	2
Total vacancies created.....	53	32	85
Present September 30, 1916.....	296	243	539
	349	275	624

Movement of Population for the Two Years Ending September 30, 1916.

TWO YEARS ENDING SEPTEMBER 30, 1916	Male	Female	Total
Present October 1, 1914.....	126	126	252
Admitted October 1, 1914, to September 30, 1916.....	239	148	387
Readmitted during same period.....	23	25	48
Total enrollment for period.....	388	299	687
Discharged October 1, 1914, to September 30, 1916.....	67	37	104
Died during period.....	20	18	38
Eloped during period.....	5	1	6
Total vacancies created.....	92	56	148
Present September 30, 1916.....	296	243	539
	388	299	687

Table No. 2.

Showing Ages of Four Hundred Thirty-Five Inmates Admitted from
October 1, 1914, to September 30, 1916.

Under 10 years.....	112
10 to 15 years.....	160
15 to 21 years.....	129
21 to 50 years.....	34
	435

Table No. 3.

Showing Causes Assigned by Relative or Examining Physician for
Condition of Five Hundred Thirty-Nine Inmates Present
September 30, 1916.

Accident	3
Acute poliomyelitis	3
Acute sickness	68
Birth injury	15
Cerebral hemorrhage	1
Cerebro spinal meningitis	10
Congenital	287
Cretinism	2
Deprivation	2
Dysastocia	1
Epilepsy	7
Hydrocephalus	5
Malnutrition	1
Masturbation	2
Maternal shock	7
No cause given	55
Post typhoid	1
Prenatal influence	4
Syphilis, acquired	1
Syphilis, congenital	1
Traumatism	25
Unknown	38
Total	589

Table No. 4.

Death Record for Two Years Commencing October 1, 1914, and Ending
September 30, 1916.

CAUSE OF DEATH	Male	Female	Total
Amyloid disease		1	1
Asphyxia (during attack of grand mal)		1	1
Bronchitis, acute	1		1
Bulbar paralysis	3	1	4
Cerebro apoplexy	1		1
Endocarditis, acute		1	1
Enteritis, acute		2	2
Erysipelas, migratory	1		1
Exhaustion from epilepsy	3	1	4
Status epilepticus	3	2	5
Gastritis, acute	1		1
Gastric enteritis, acute	1		1
General paresis		1	1
Hydrocephalus		1	1
Laryngeal paralysis, acute		2	2
Oedema of lungs (following epileptic attack)	1		1
Organic disease of heart	1		1
Peritonitis, septic		1	1
Pneumonia, phthisis	1		1
Pneumonia, broncho		1	1
Pneumonia, lobar	1	1	2
Paraplegia cerebri spastica		1	1
Tuberculosis, general	1		1
Tuberculosis, pulmonary	1	1	2
Totals	20	18	38

Table No. 5.

Showing Counties from Which Four Hundred Thirty-Five Inmates
Were Admitted During the Two Years Commencing October 1,
1914, and Ending September 30, 1916.

COUNTIES	ADMITTED			READMITTED			GRAND TOTAL		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Adams	1		1				1		1
Asotin	2		2				2		2
Benton	4	2	6	1		1	5	2	7
Chelan	4	5	9	1		1	5	5	10
Clallam	1	1	2				1	1	2
Clarke	2	8	6		2	2	2	5	7
Columbia									
Cowlitz	8	1	4				8	1	4
Douglas	8	2	5				8	2	5
Ferry	1		1				1		1
Franklin	3		3	1		1	4		4
Garfield	1		1				1		1
Grant	2		2				2		2
Grays Harbor	3	1	4	3	1	4	6	2	8
Island	2	2	4				2	2	4
Jefferson	2		2				2		2
King	76	39	115	5	5	10	81	44	125
Kitsap	5		5				5		5
Kittitas	3	7	10				3	7	10
Klickitat	1		1				1		1
Lewis	6	5	11				6	5	11
Lincoln	6		6				6		6
Mason	1		1				1		1
Okanogan	3		3				3		3
Pacific	1	1	2				1	1	2
Pend Oreille									
Pierce	28	19	42	2	6	8	25	25	50
Skagit	10	8	18	1		1	11	8	19
Skamania									
Snohomish	16	12	28		2	2	16	14	30
Spokane	18	12	30	3	5	8	21	17	38
Stevens	1	2	3				1	2	3
Thurston	1	2	3				1	2	3
Wahkiakum									
Walla Walla	8	5	13	1	2	3	9	7	16
Whatecom	13	5	18	2	1	3	15	6	21
Whitman	2	5	7	1	1	2	3	6	9
Yakima	11	9	20	2		2	13	9	22
Totals	239	148	387	23	25	48	262	173	435

Table No. 6.
Showing Counties from Which Five Hundred Thirty-Nine Inmates
Present September 30, 1916, Are From.

COUNTIES	Male	Female	Total
Adams	1	.....	1
Asotin	2	1	3
Benton	3	1	4
Chelan	6	5	11
Clallam	4	1	5
Clarke	6	3	9
Columbia	1	.....	1
Cowlitz	6	.....	6
Douglas	3	2	5
Ferry	1	1	2
Franklin	3	2	5
Garfield	2	.....	2
Grant	2	1	3
Grays Harbor	8	5	13
Island	1	4	5
Jefferson	3	1	4
King	81	68	149
Kitsap	6	.....	6
Klittitas	5	8	13
Klickitat	1	1	2
Lewis	10	5	15
Lincoln	9	4	13
Mason .....	.....	2	2
Okanogan	4	1	5
Pacific	3	4	7
Pend Oreille .....	.....	.....	.....
Pierce	28	22	50
San Juan .....	.....	.....	.....
Skagit	1	8	9
Skamania	1	.....	1
Snohomish	20	26	46
Spokane	25	20	45
Stevens	8	3	11
Thurston	3	3	6
Wahkiakum .....	.....	.....	.....
Walla Walla	7	8	15
Whatcom	16	12	28
Whitman	7	9	16
Yakima	9	12	21
Totals.....	296	243	539

Statement No. 1.

Showing Balances on Hand First of Period, Receipts, Disbursements
and Balances on Hand Last of Period, Commencing October 1,
1914, and Ending September 30, 1916.

INMATE FUND			
1914			
Oct. 1	Balance on hand first of period.....	\$188 17	
1916			
Sept. 30	Receipts during two-year period.....	2,792 10	
Sept. 30	Disbursements during two-year period.....		\$2,656 23
Sept. 30	Balance on hand last of period.....		324 04
	Totals.....	\$2,980 27	\$2,980 27

AMUSEMENT FUND			
1914			
Oct. 1	Balance on hand first of period.....		
1916			
Sept. 30	Receipts during two-year period.....	\$551 60	
Sept. 30	Disbursements during two-year period.....		\$518 67
Sept. 30	Balance on hand last of period.....		32 93
	Totals.....	\$551 60	\$551 60

MISCELLANEOUS FUND			
1916			
Sept. 30	Receipts during two-year period.....	\$607 00	
Sept. 30	Remitted to State Treasurer.....		\$607 00
	Totals.....	\$607 00	\$607 00

(2)
(1)

VIEW OF BUILDING AND GROUNDS AT STAFF SOLDIERS HOME

STATE SOLDIERS' HOME.

To the Honorable State Board of Control, Olympia, Washington.

GENTLEMEN: I herewith submit to you the biennial report of this institution for the period ending September 30, 1916.

The first year of this biennium, viz., from October 1st, 1914, to September 30, 1915, was in charge of J. D. MacLean, M. D., an efficient and conscientious officer, under whose direction buildings were repaired and made more sanitary, with small cost to the state.

We have been unable to make extensive improvements on account of the limited funds available. We have, however, built a vegetable and fruit house of cement and wood, and the unsanitary hog pens have been removed and temporary quarters constructed.

The hospital has been kalsomined and otherwise renovated; the hospital reception room refurnished, principally from donations. The upper story of the Colony commissary building has been finished off for sleeping rooms for employes, Union Hall barracks partitioned off and other minor improvements made.

We have also cleared and stumped some eight acres of land.

All of our buildings are old, having been built from 14 to 24 years ago, but all are now in good repair, except painting, four of which will need a coat of paint outside, and the roofs treated with a fireproof roofing paint.

The buildings, however, are not adequate to accommodate the needs of this Home, and we should have one good one-story barracks to accommodate from 100 to 120 men; also an up-to-date well equipped hospital presided over by competent nurses, to both of which your attention has been called in the suggestive budget now in your hands for the coming term.

We have endeavored to make the very pleasant and attractive location and grounds now beautiful, if possible more so, by planting and cultivating a choice variety of flowers, and in other ways making it as homelike as possible.

The deportment of the members has been commendable and greatly improved since the state-wide prohibition law went into effect and and there have been very few cases of violation of the rules.

The health of the institution is excellent and the death rate very small compared with the ages of the men, who are mostly Civil War Veterans, and from the reports of the other institutions we believe we have the lowest death rate in any state Home in the United States, which may be principally accounted for by the healthful location, excellent spring water and variety of vegetables and fruits raised upon the farm, supplying the tables with nourishing and healthful foods.

Our herd of cows consists of such stock as could be purchased

cheaply, or raised without special care, but we are keeping an accurate account of each individual animal's record, so that the unprofitable ones may be replaced by purchase, or by raising and the "present boarders" be weeded out and replaced with choice dairy stock.

We raise each year from 100 to 125 pigs, which we think will compare favorably with stock raised in any other institution in this state.

Most of the work here has been performed by members, but with their advancing age more outside help will be required, and we would suggest trained nurses in the hospital, even though we have to reduce the help in some other department to accomplish this purpose. The future will naturally give us a large number of patients which we must prepare for now.

LIST OF DONORS.

The following parties are entitled to our thanks for gifts to the Home and valuntary services rendered:

A. Sully W. R. C.....	Dayton, Wash.
Sheridan W. R. C.....	Tacoma, Wash.
W. R. C. Prosser.....	Prosser, Wash.
Lawton W. R. C.....	Orting, Wash.
Daughters of Veterans.....	Tacoma, Wash.
Mrs. E. Ricksacker.....	Tacoma, Wash.
W. R. C.....	Puyallup, Wash.
Mrs. J. H. Wiley.....	North Yakima, Wash.
Col. Dan'l McCook W. R. C.....	Wenatchee, Wash.
Julia Dent Grant Tent No. 3.....	Tacoma Wash.
Custer Post No. 6 G. A. R.....	Tacoma, Wash.
L. C. Ladd, W. R. C.....	Puyallup, Wash.
Mrs. Lizzie F. Belles.....	Puyallup, Wash.
Sedgwick Corps No. 4.....	Spokane, Wash.
Ellsworth Corps No. 3.....	Vancouver, Wash.

Since April, 1916, regular services at the Assembly Hall have been maintained, and also a Bible class. The following persons outside of the Home have supplied and rendered valuable assistance:

Revs. Church, Pascoe, Carter, Milligan, Wightman, March, Hutchinson, Messrs. Osgood, Ellsworth and Griswold and Mrs. Bartell, Mrs. Frances M. Haskell and Mrs. Joselyn.

The Colony will require a larger appropriation than the last one because it is growing and some worthy applicants cannot be admitted until a larger appropriation can be made. We would suggest \$45,000.00 as sufficient.

We have given you a brief summary of our needs, which we are ready at all times to supplement when called upon to do so.

ED. C. WARNER, *Superintendent.*

WASHINGTON SOLDIERS' HOME.

Gain and loss in membership from October 1, 1914 to September 30, 1916.

Total membership October 1, 1914.....	701	
Gain by admission and readmission.....	198	800
Loss by honorable discharge.....	369	
Loss by dishonorable discharge.....	1	
Loss by death.....	62	432
Total membership September 30, 1916.....	467	
Net loss during the two year period	234	

QUARTER ENDING	GAIN	LOSS			PRESENT AND ABSENT		
	Admission	Death	Honorable Discharge	Dishonorable Discharge	Absent With Leave	Present	Present and Absent
December 31, 1914.....	40	7	25	.....	368	342	710
March 31, 1915.....	38	13	37	.....	372	323	695
June 30, 1915.....	19	9	67	.....	347	294	641
September 30, 1915.....	21	12	89	.....	255	305	561
December 31, 1915.....	16	7	62	.....	216	303	519
March 31, 1916.....	27	9	35	.....	185	310	495
June 30, 1916.....	21	5	18	1	233	249	487
September 30, 1916.....	16	1	35	.....	205	262	467
Totals.....	198	62	369	1	2,187	2,391	4,578
Average per quarter.....	24.75	7.7	46.12	.....	273.37	298.87	572.25
Average present for biennium.....						310.87	

Mexican war veterans.....	1
Indian war veterans.....	16
Civil war veterans.....	407
Spanish American war veterans.....	43
	467

**AGES OF MEMBERS ADMITTED DURING THE TWO YEARS ENDING
SEPTEMBER 30, 1916.**

<i>Age</i>	<i>Year ending Sept. 30, 1915</i>	<i>Year ending Sept. 30, 1916</i>	<i>Total</i>
38.....	1	1	2
39.....	1	..	1
40.....	2	..	2
42.....	4	2	6
43.....	1	..	1
44.....	1	..	1
45.....	2	3	5
47.....	...	1	1
49.....	1	1	2
51.....	1	1	2
52.....	1	..	1
53.....	1	..	1
54.....	2	..	2
55.....	3	2	5
56.....	1	1	2
57.....	2	..	2
59.....	1	1	2
60.....	1	..	1
61.....	1	1	2
65.....	4	..	4
66.....	5	..	5
67.....	5	4	9
68.....	7	4	11
69.....	14	6	20
70.....	8	6	14
71.....	11	5	16
72.....	4	5	9
73.....	4	11	15
74.....	4	7	11
75.....	5	4	9
76.....	3	2	5
77.....	6	4	10
78.....	1	..	1
79.....	2	2	4
80.....	1	1	2
81.....	1	1	2
82.....	3	1	4
84.....	1	..	1
85.....	2	2	4
87.....	...	1	1
	118	80	198

**ADMISSION OF MEMBERS BY COUNTIES FOR THE TWO YEARS ENDING
SEPTEMBER 30, 1916.**

<i>County</i>	<i>Year ending Sept. 30, 1915</i>	<i>Year ending Sept. 30, 1916</i>	<i>Total</i>
Adams		1	1
Asotin	1	..	1
Chelan	1	..	1
Clarke	5	..	5
Clallam	1	..	1
Cowlitz		2	2
Grant	1	..	1
Grays Harbor	2	3	5
Jefferson		1	1
King	23	11	34
Klickitat	1	..	1
Kitsap	4	1	5
Kittitas	1	1	2
Lewis	4	3	7
Lincoln	1	..	1
Okanogan	1	..	1
Pacific	1	..	1
Pierce	43	38	81
Skagit		2	2
Snohomish	3	4	7
Spokane	10	5	15
Thurston	2	2	4
Wahkiakum	1	..	1
Walla Walla	2	1	3
Whatcom	4	2	6
Whitman	2	..	2
Yakima	4	3	7
	118	80	198

**NATIVITY OF MEMBERS ADMITTED DURING TWO YEARS ENDING
SEPTEMBER 30, 1916.**

<i>Country</i>	<i>Year ending Sept. 30, 1915</i>	<i>Year ending Sept. 30, 1916</i>	<i>Total</i>
Canada	6	..	6
Denmark	1	..	1
Germany	8	4	12
Ireland	7	6	13
New Brunswick		2	2
Norway	1	..	1
Russia	1	..	1
Scotland		1	1
Sweden	2	1	3
United States	91	66	157
Wales	1	..	1
	118	80	198

CONDITION OF SOLDIERS' TRUST FUND.

Balance 1st October, 1914.....	\$2,066 30
Received	10,088 67
	<u>\$12,154 97</u>
Disbursed	10,716 76
Balance September 30, 1916.....	<u>\$1,438 21</u>

DECEASED MEMBERS' FUND.

On hand October 1, 1914.....	\$1,381 99
Accrued interest	142 66
On hand September 30, 1916.....	<u>\$1,524 65</u>

WASHINGTON SOLDIERS' COLONY.

Movement of Colony population during the biennium.

Population September 30, 1914—Male, 158—Female, 15—Total 173.*

	<i>Men</i>	<i>Women</i>	
Admitted	54	25	
Discharged	44	10	
Died	16	2	
Gain	54	25	
Loss	60	12	
	6 loss	13 gain	
	<i>Men</i>	<i>Women</i>	<i>Total</i>
September 30, 1914.....	158	15	173
	6 loss	13 gain	
	<u>152</u>	<u>28</u>	<u>180</u>

*Population September 30, 1914 shown as.... 173

Correct population September 30, 1914..... 172

Total population September 30, 1916..... 179

STATE VETERANS' HOME.

To the Honorable State Board of Control:

I herewith submit to you the Biennial Report of this Institution for the period commencing October 1, 1914, and ending September 30, 1916.

The conditions of this institution are good. I think almost universal satisfaction exists among the members. A great change for the better was experienced when the dry law went into effect last January. The health of the members generally is fairly good, considering the ages, and the most important thing that is needed is more room. The increasing number of applications, as shown later on in this report, make it very apparent that more buildings must be had in order to accommodate the seemingly inexhaustible applicants.

The liberality of the State of Washington towards the soldiers of the Civil War and their wives has been almost unbounded. The money appropriated by the last legislature for improvements has been used as much as possible for the specific purpose for which it was appropriated and to the best advantage for the comfort of the occupants, the preservation of property, and care has been taken to reduce the fixed expense of maintenance as much as possible.

The amount appropriated for maintenance, amounting to \$140,000.00, which was based on a population of five hundred at thirty-nine cents per capita, together with the United States fund of twenty-seven cents per capita for the men, will carry us through, with probably some money to turn back to the State. Notwithstanding the fact that our population has exceeded an average of over five hundred, the reduction in per capita maintenance can largely be attributed to improvements that have been made in the heating system, fuel, labor, and other saving devices brought about during the last two years.

The amount appropriated for repairs and improvements, amounting to \$21,000.00, has been used approximately as follows:

Improvements to Cemetery.—About five acres of land have been cleared and graded. Water has been brought from the main line and hydrants placed on the grounds, part of which have been leveled and seeded to clover. A new road has been graded and a new fence built around the cemetery. The total cost of improvements to cemetery amounted to \$1,200.00.

Grading.—One hundred and twenty-five (\$125.00) dollars was expended for grading around the rear of the hospital building and about five hundred yards of earth was excavated from underneath the hospital building for ventilation purposes, at a cost of about fifty cents per yard. Much damage was done to this building by not having this done when the building was constructed. No provision whatever was

made for ventilation, which caused the floors and woodwork of the foundation to decay, allowing the building to settle and causing damage to the plumbing, which required constant expense for repairs.

Oil Tank.—A new one thousand barrel, cement, oil tank has been built at a cost of about \$1,100.00, which includes the grading of the ground, valves and pipe for connections.

Remodeling Kitchen.—The main kitchen has been remodeled. A new tiling and cement floor was built and the kitchen was newly equipped throughout at a cost of about \$1,400.00. These repairs cost more than was estimated on account of the decayed condition of the floors and foundation. It is now a very complete and sanitary kitchen and is arranged with a view of labor saving and convenience.

Porch.—A new porch has been built at the Superintendent's cottage at a cost of \$140.00.

Painting.—The Washington barracks has been repainted complete, outside and inside and the roof. The outside of the two eight-room cottages have been repainted and also the roofs. The large dining room and kitchen were repainted, outside, inside and roofs. All of this was two-coat work. These buildings are now as good as new; they were built six years ago. The total cost of repainting, as above stated, amounted to \$1,450.00.

Annex.—A new annex has been built to the hospital building at a cost of \$1,675.00. The amount estimated for this building was \$2,000.00. It is a great convenience as it serves to separate the disagreeable and contagious cases, which are quite numerous among so many old people.

Engine.—A thirty (30) horsepower Enberg engine has been installed as an auxiliary in the power house at a cost of \$1,350.00. This engine not only serves as an auxiliary, but is used during the day to run the electric motors for ice plant, laundry, dishwashing machine, etc., at a much less cost for fuel than was used to run the larger engine.

Reservoir.—A new reinforced concrete reservoir has been built with a capacity of over one hundred thousand gallons at a cost of \$3,550.00, and about one and one-half acres of land purchased for \$500.00. This land contains a large spring and can be utilized any time that it may be needed by building a small concrete dam and by piping about three hundred feet to the present reservoir. The right-of-way for this pipe line is included in the purchase of land. Added to the cost of this improvement will be the inspector's salary, advertising for bids and extra work, at a total cost of \$4,250.00. This improvement will insure an abundant supply of water for all time.

Driveway.—A permanent driveway has been graded and graveled from the county road to the office, which cost the state approximately \$550.00.

Dock.—Three hundred and fifty (\$350.00) dollars was expended for repairing the home dock. A number of new piles was required.

Garden.—About one and one-quarter acres of garden land, adjoining the garden, have been cleared and drained and put into cultivation. This is very valuable garden land and a sea wall should be built to stop the wash from the high tides in the winter. It would increase the value of this garden land thirty per cent and be a great improvement to the state's property. A good fence will also have to be built around this garden in another year.

Orchard.—An orchard of two hundred trees has been planted on the side hill and in a few years it will produce plenty of apples to supply the institution, if properly cared for.

Adjutant's Cottage.—The old cottage at the foot of the hill, formerly used as the superintendent's residence, has been remodeled, or practically built anew, and a neat cottage has been made for the Adjutant at a cost of \$300.00. This improvement is a good investment and will add to the assets of the State.

Old Office.—The old office under the hill has been remodeled and a bath and lavatory put in. This building now accommodates seven members. The cost for this improvement amounted to \$110.00.

Laundry.—Electric motors and electric irons have been installed in the laundry at a cost of \$400.00, and the fifteen (15) horse power steam engine was taken out. This will result in a saving of fuel and will be more convenient and comfortable for the aged women who do the ironing.

Various other minor improvements have been made. The contour of the grounds makes necessary expenditures that would not be needed if the grounds were not so irregular. However small the expenditure has been for the necessary repairs or improvements as much consideration as possible has been given to permanency.

Respectfully submitted,

W. H. WISCOMBE,
Superintendent.

Table No. 1.

Showing Loss and Gain from October 1, 1914, to September 30, 1916.

			Men	Women	Total
Total membership October 1, 1914.....			408	189	592
GAIN—					
By admission and readmission.....			246	122	368
Totals.....			649	311	960
LOSS—			Men	Women	
By honorable discharge.....			48	19	
By death			122	18	
Loss.....			170	37	207
Total on roll September 30, 1916.....			479	274	753
Gain biennial period ending September 30, 1916.....			76	86	161
Civil war veterans on roll September 30, 1916.....			468		
Spanish-American war veterans on roll September 30, 1916.....			11		
Total.....			479		

Table No. 2.

Showing Movement of Population October 1, 1914, to September 30, 1916.

MEN.

QUARTER ENDING	GAIN	LOSS		ABSENT AND PRESENT		
	Admis- sion	Death	Dis- charge	Absent	Present	Total Absent and Present
December 31, 1914.....	83	14	9	77	336	413
March 31, 1915.....	25	17	4	98	834	417
June 30, 1915	26	12	8	104	319	423
September 30, 1915.....	31	4	5	98	352	445
December 31, 1915.....	36	26	6	116	333	449
March 31, 1916.....	25	16	5	123	330	453
June 30, 1916.....	35	11	9	160	308	468
September 30, 1916.....	35	22	2	128	851	479
Totals.....	246	122	48	894	2,663	3,547
Average for quarter.....	30.75	15.25	6	111.75	332.87	443.37

Table No. 3.

Showing Movement of Population October 1, 1914, to September 30, 1916.

WOMEN.

QUARTER ENDING	GAIN	LOSS		ABSENT AND PRESENT		
	Admis- sion	Death	Dis- charge	Absent	Present	Total Absent and Present
December 31, 1914.....	20	.....	2	48	159	207
March 31, 1915.....	14	2	1	61	157	218
June 30, 1915.....	18	2	1	75	158	233
September 30, 1915.....	16	2	.....	67	180	247
December 31, 1915.....	18	3	1	81	180	261
March 31, 1916.....	6	5	9	84	169	253
June 30, 1916.....	11	8	2	108	151	259
September 30, 1916.....	19	1	3	91	183	274
Totals.....	122	18	19	615	1,387	1,952
Average per quarter.....	15.25	2.25	2.37	76.87	167.12	244

Table No. 4.

Showing Nativity of Members Admitted During Two Years Ending
Sept. 30, 1916.

MEN

Countries	Number
United States.....	205
Canada	7
England	9
Germany	6
Norway	3
Ireland	7
Scotland	1
Switzerland	1
Wales	1
Holland	1
Denmark	2
Newfoundland	1
Nova Scotia	2
Total.....	246

Table No. 5.
Showing Nativity of Members Admitted During Two Years Ending
Sept. 30, 1916.

WOMEN	
<i>Countries</i>	<i>Number</i>
United States.....	106
Canada	8
New Brunswick	2
Switzerland	1
Germany	1
England	1
Scotland	2
Ireland	1
Total.....	122

Table No. 6.
Ages of Members Received Sept. 30, 1914, to Sept. 30, 1916.

MEN CIVIL WAR VETERANS	
<i>Age</i>	<i>Number</i>
63	1
64	2
65	3
66	6
67	11
68	10
69	19
70	21
71	18
72	24
73	19
74	15
75	10
76	20
77	6
78	8
79	6
80	7
81	5
82	7
83	2
84	3
85	5
86	2
87	2
88	3
91	1
93	1
Total.....	237

Average age 73 years, 7 months, 9 days.

Table No. 6—Continued.
SPANISH-AMERICAN WAR VETERANS

<i>Age</i>	<i>Number</i>
34	1
35	1
36	1
44	1
46	1
49	1
50	1
59	1
63	1
Total.....	9

Average age 46 years, 2 months

Table No. 7.
Women Admitted During Two Years Ending Sept. 30, 1916.

<i>Age</i>	<i>Number</i>
47	1
48	1
50	3
51	3
52	1
53	1
54	4
55	2
56	1
57	1
58	3
59	5
60	7
61	1
62	3
63	7
64	6
65	7
66	10
67	8
68	4
69	9
70	5
71	4
72	6
73	1
74	5
75	3
76	4
77	1
80	1
82	2
83	1
87	1
Total.....	122

Average age 64 years, 8 months

Table No. 8.
Showing Admission of Members by Counties for Two Years Ending
Sept. 30, 1916.

<i>Counties</i>	MEN	<i>Number</i>
Asotin		2
Chehalis		2
Chelan		3
Clallam		5
Cowlitz		2
Grays Harbor		2
Grant		1
Island		2
Jefferson		5
King		76
Kitsap		37
Lewis		1
Lincoln		1
Mason		5
Pend Oreille		1
Pierce		37
Skagit		8
Snohomish		11
Spokane		19
Stevens		3
Thurston		1
Walla Walla		1
Whatcom		10
Whitman		3
Yakima		8
Total		246

Table No. 9.
Showing Admission of Women Members by Counties for Two
Years Ending Sept. 30, 1916.

<i>Counties</i>	WOMEN	<i>Number</i>
Asotin		1
Chelan		1
Clallam		3
Cowlitz		2
Grays Harbor		1
Island		1
Jefferson		2
King		28
Kitsap		26
Mason		2
Pend Oreille		1
Pierce		22
Skagit		3
Snohomish		7
Spokane		13
Stevens		1
Thurston		1
Whatcom		4
Yakima		3
Total		122

MEMBERS' FUND.

Balance October 1, 1914.....	\$1,752 21	
Receipts	3,980 19	
Disbursements		\$5,199 16
Balance September 30, 1916.....		518 24
Totals.....	\$5,712 40	\$5,712 40

DECEASED MEMBERS' FUND.		
Balance October 1, 1914.....	\$987 10	
Receipts	1,997 25	
Total.....		\$2,984 35
Disbursements		658 44
Balance September 30, 1916.....		\$2,310 91

STATE SCHOOL FOR DEAF.**State Board of Control:**

GENTLEMEN: I have the honor to submit the biennial report for the School for Deaf covering the two years ending September 30, 1916.

ATTENDANCE.

The total number of children who have attended school during the two years has been 172.

From October 1, 1914, to September 30, 1915:

Boys	92
Girls	65
Total.....	157

From October 1, 1915, to September 30, 1916:

Boys	83
Girls	59
Total.....	142

These figures show the actual total enrollment and not the average attendance. Every child coming to school is enrolled on arrival. Some do not stay very long but are counted in the total above.

These were divided among the various counties of the state as follows:

POPULATION BY COUNTIES.

From October 1, 1914, to September 30, 1916:

Adams	5
Asotin	2
Benton	1
Clallam	2
Clarke	11
Chelan	2
Douglas	1
Grays Harbor	12
Grant	1
Island	3
Jefferson	1
King	26
Kitsap	3
Kittitas	4
Klickitat	1
Lewis	8
Mason	1
Okanogan	2
Pacific	4
Pierce	19
Skagit	7
Snohomish	8
Spokane	20
Stevens	3
Thurston	2
Walla Walla	4
Whatcom	2
Whitman	1
Yakima	16

To be safe we should provide for 150 pupils for the next two years. Four years ago I reported:

"The main building is a much patched structure about twenty-four years old, poorly planned and badly built, without proper ventilation or light, and is expensive to keep up. The walls of soft brick rest directly on the ground with no attempt at water-proofing, and are consequently damp and cold. It is a perfect fire-trap and has been condemned by several architects. A modern structure to house the business of the institution, and provide quarters for the officers can be built for the sum of \$50,000.00. The only part of the old building worth saving is the wing used for dining rooms and chapel. This can be remodeled, making provision for cold storage and store rooms, and rendered fire-proof in keeping with other buildings for the sum of \$15,000.00."

In my report of two years ago, I said:

"Our present school rooms are far from adequate for that number (150) and are not properly lighted or ventilated, being on the fourth floor of the old building which has been condemned and considered unsafe and unsanitary for the last ten years. This should be replaced though the present financial condition of the country will compel us to continue to use it for administration purposes for some time to

GIRL BULL TEAM AT STATE SCHOOL FOR DEAF

come. But I feel that I would be neglecting my plain duty should I fail to urge the imperative need of a school building here. The enormous importance of eyesight to our deaf children makes it almost criminal to force them to work in school rooms where artificial light must be used at all times. We have three such and not one of the others is properly lighted or ventilated. A good school building, large enough to accommodate the school for years to come, can be built for \$40,000.00."

I quote these for the sake of emphasis. The need grows more imperative each year. The old building now in use has been condemned by all who know anything about it and we have asked repeatedly during the past ten years to have it replaced but have failed to get it. It seems impertinent to call your attention at this time to the fact that the state has spent less money for buildings at this school during he past twenty years than at any other institution in the state.

OUR METHODS.

I have found no occasion to make any marked change in our methods of instruction. We are still using the American Combined System, under which all known methods and variations are used for the attainment of an object common to all. Speech and speech reading, commonly called the "lip language," are considered very important, but mental development, the acquisition of language and general knowledge are regarded as still more important. So far as circumstances permit, such method is chosen for each pupil as seems best adapted to his needs and capacity. Our rule is that adopted by the American Instructors of the deaf in convention assembled, "any method for good results. All methods and wedded to none." We are getting intelligent speech and speech reading from about 65 per cent of our children.

At present we have 124 pupils, 41 of whom do not receive instruction in speech and lip reading and 83 who do receive it daily.

We have seven classes who receive all their instruction by the oral method. One class has three hours daily in oral work with a hearing teacher and three hours daily in written work with a deaf teacher. Our high class do their written work with a deaf teacher and have a half hour lesson daily from a hearing teacher of speech and lip reading. This is as much oral work as can be done with our present facilities.

In the spring of 1916, through the assistance of Lieutenant Taylor of the 21st U. S. Infantry, stationed at Vancouver Barracks, we started a class of boys and one of girls in the physical exercises used in the army for correcting carriage and proper walking. These exercises are known as the "setting up" exercises and "Butts' Manual." When the troops were ordered south this work was carried on by Mr. Fraser, our

steward, an ex-army man. Both classes became very proficient, and at the close of school a competition was held, in which the girls won by a score of .96 while the boys received .95. The judge was a regular army man from the garrison. The improvement in the members of the classes was so marked that I have continued the drill and Mr. Fraser is instructing all the children in school except the very youngest.

GRADES IN SCHOOL.

In common with most of the American schools for the deaf we have arranged our course so that each grade covers what we expect the average deaf child to cover in one year. Thus when we speak of a class in the fifth grade we refer to the work we expect from the average class during the fifth year in school. This is not the same as the fifth grade in the public schools of the state.

A series of tests have been conducted under the auspices and with the cooperation of the Efficiency Committee of the Conference of Superintendents and Principals of American Schools for the Deaf during the past two years and covering one thousand children. The conclusions reached have been summed up as follows:

1. The deaf child is about three years behind the hearing child in learning ability.
2. The deaf boy is equal in learning ability to the deaf girl, differing in this respect from the hearing boy who falls below the hearing girl.
3. The deaf boy approximates the hearing boy more closely than the deaf girl approximates the hearing girl in learning ability.
4. The congenitally deaf and the adventitiously deaf are equal in learning ability.

The first of these conclusions is of great importance to all interested in the education of the deaf. If the fact is borne in mind that the deaf child as a part of its handicap of deafness is three years behind the hearing child much unfair comparison and causeless discouragement and criticism will be spared.

OUR FACULTY.

The only change I have to report in our faculty is the addition of Mr. John E. Skoglund, who graduated at this school and attended Galaudet College. Mr. Skoglund is acting as teacher and supervisor of the older boys. The other teachers are still with us and I feel that by reason of added experience and no loss of zeal we have a stronger corps than ever before. The salaries paid in our special branch of the profession are increasing all over the United States and I have asked for some increase in my estimate for the coming biennium.

HEALTH.

During this period we have had more sickness than usual, but fortunately have had only one death, although much school time has been lost.

On May 29, 1915, John Plorkoski was killed while walking on the railroad track about two miles from the school.

In the fall of 1915 we had 45 cases of tonsillitis. Finding the disease had become epidemic, we fumigated the buildings and were able to check it absolutely.

In January, 1916, when our section was visited by the extremely cold weather, we had 98 cases of la grippe. These two epidemics interfered seriously with the school work in all departments, and added materially to the cost for the year.

DEPARTMENT OF INDUSTRY.

I consider the industrial department of our school equal in importance to the literary. The handicap of deafness makes it difficult, if not impossible, for our graduates to secure jobs unless they have acquired a start while at school.

It is our aim to teach each child the rudiments of some trade and such habits of industry as will enable him to support himself after graduation. So far, we are able to say with a good deal of pride, that not one of our graduates has ever become a charge on the public, either as an inmate of a poor house or a jail. While our graduates do not always follow the trade taught at the school, still they have learned to work while here and most of them become taxpayers very soon after leaving school.

Both boys and girls are taught to make up beds, sweep and take care of rooms. The children do all the work in their dormitory buildings, under competent supervision.

We have regular classes in cooking, sewing, printing, woodwork, leather work and laundry work. Competent instructors in these branches being employed.

The modern printing office is incomplete without a linotype machine. Deaf men make fine operators of these machines. I recommend the purchase of one for our office as our boys will then be able to get positions at good pay immediately on leaving school. I have included a Model Five Mergenthaler to cost \$2,500.00 in my estimate for the budget.

Our class in woodwork needed larger quarters and we purchased the materials and the class built an addition to the industrial building of reinforced concrete 20x40 feet, doing all the work under the instruction of their teacher. The young men turned out from this class have no difficulty in earning their way.

The leather work done includes all kinds of repairs to shoes and harness. This class keeps the shoes of this school and the School for

the Blind in repair as part of their class work. This is considered a good trade for the deaf as it does not require a large investment to begin. For a few dollars the deaf boy can start a business at home and earn his living.

COSTS.

The actual per capita cost of this school for the biennium has been .824 per day or \$300.76 per year. This is somewhat in excess of our estimate, but the increased cost of practically everything is the explanation.

We have allowed for this and are asking an allowance of 95 cents per day or \$346.75 per year for 150 children. The day schools for the deaf in the different cities of the state are caring for so many of the children who would come to us that I feel safe in asking you to provide for only 150.

We are still holding the cost of this school well below the average for similar schools throughout the United States and especially is this true of the Western States. In this connection I feel justified in calling attention to the fact that our graduates compare favorably with those from all other schools, as represented in Gallaudet College, the National college for the deaf at Washington, D. C. This college is supported by the United States government and patronized by all the states. Our representatives stand near the top in all the activities of the college.

IMPROVEMENTS NEEDED.

We need a new school building. One that is planned for a school house and is properly lighted and ventilated, and which can be closed when school is out and not used for anything else. Such a building to meet our needs for many years can be built for the sum of \$40,000.00.

The present main building has been condemned as unfit for use, unsafe and unsanitary. It should be replaced. A suitable building can be erected for \$50,000.00.

The engine and pump rooms are very much in need of remodelling. Both rooms are crowded and unsafe. The sum of \$6,000.00 is needed here.

We are now using an old frame barn as a stable and garage. It is unsightly and unsafe and should be replaced by a brick barn which can be built for \$3,000.00.

I must again increase my estimate for repairs on this old building. I consider \$5,000.00 as little as we can get along with if we must use these buildings another two years.

For about eight years the institution has been using an automobile owned by the superintendent. Other institutions have been supplied by the state with one or more machines as needed. I see no reason for making an exception of this school and I have included in my estimate the price of such a machine as I have supplied.

NEEDS FOR COMING TWO YEARS.

For maintenance of 150 pupils at .05 per day or \$346.75 per year	\$104,025 00
For repairs and improvements.....	5,000 00
Manual training supplies	2,000 00
Library	300 00
Expenses of pupils attending Gallaudet College...	2,000 00
School house	40,000 00
Administration building	50,000 00
Remodel and fireproof chapel and dining room....	5,000 00
Cold storage plant.....	3,000 00
Store room	1,000 00
Engine and pump room	6,000 00
Brick barn and garage.....	3,000 00
Replace automobile now furnished by superintend- ent	1,000 00
Install Linotype in printing office.....	2,500 00
Grand total.....	\$224,825 00

In closing I desire to express my thanks to your Honorable Board for kindness and the friendly advice which I have received from you; and to the teachers, officers and employes for the hearty support and loyal cooperation which I have ever received from them and without which no success would have been possible.

Respectfully submitted,

THOS. P. CLARKE,

Superintendent.

STATE SCHOOL FOR THE BLIND.

To the State Board of Control:

GENTLEMEN: I have the honor of submitting for your consideration, the report of the State School for Blind at Vancouver, Washington, for the fourth biennial period, beginning October 1, 1914, and ending September 30, 1916.

History of the School.—Following the lead of many other states, the legislature of Washington established in February, 1886, a School for Defective Youth, including the deaf, blind and feeble-minded. As the attendance increased the groups were segregated, and in 1906 the blind children were removed to a separate building. Although under joint management with the deaf, they were in all respects a separate school. Legal separation was effected by the legislature of 1913, and, in the summer of that year, W. B. Hall was appointed first superintendent. He held this position until his death, which occurred October 20, 1915. The attendance in the school has steadily increased, until the last year of this biennial period it reached sixty-three. The legislature of 1915 appropriated \$800.00 for the establishment of a

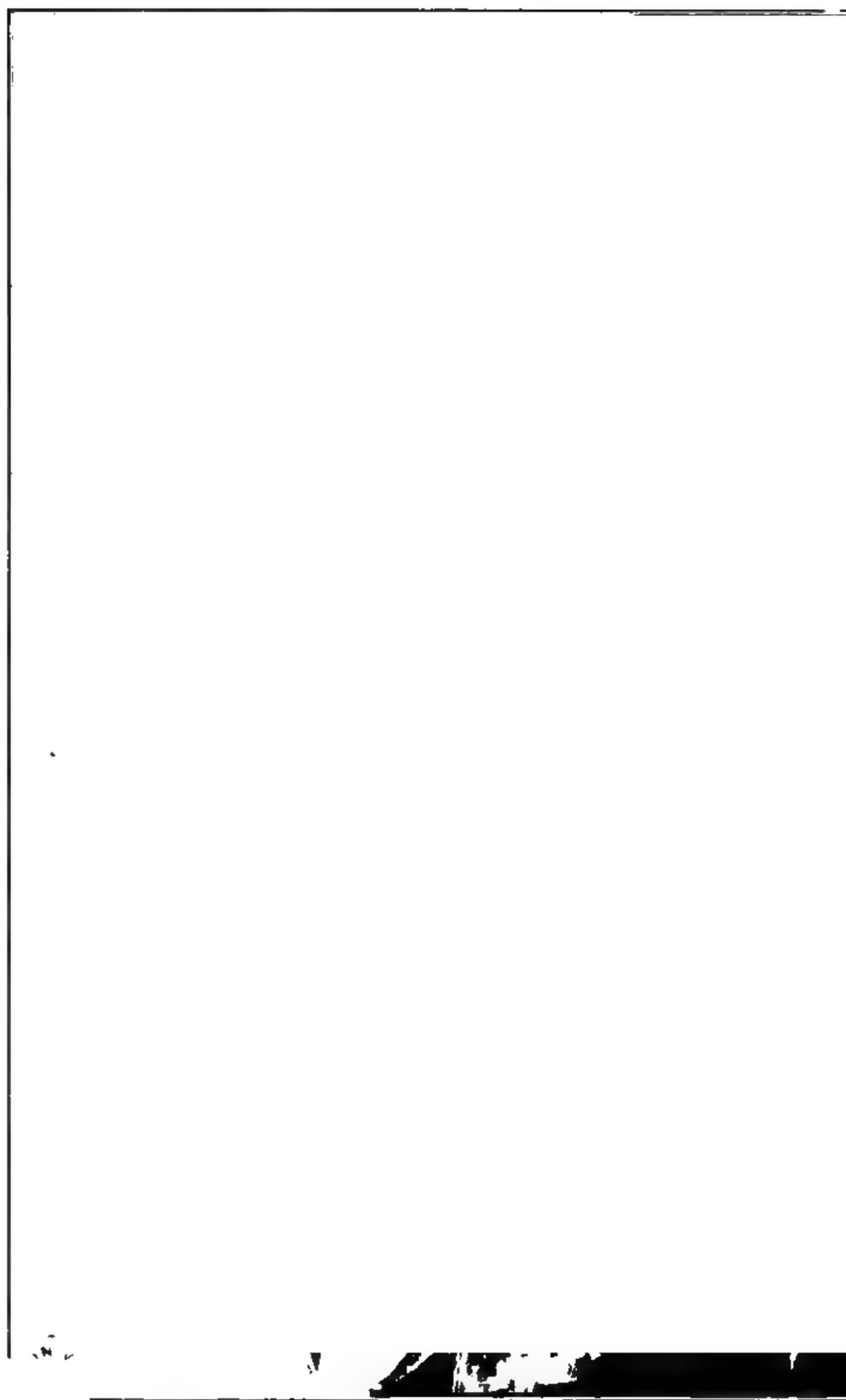
summer school for the adults. This amount has been expended during the biennium in maintaining a nine weeks' term, during the vacation period of the regular school. The fact that this short term has been eagerly attended by twenty-four different adults, several of whom are going out this year to engage in some self-supporting work, proves that this summer school is answering a positive need in our state. If made a regular part of the school program for future years, it will be a great factor in aiding the heavily handicapped man to re-adjust his life to new conditions because of blindness after maturity.

Health of Pupils: We are glad to be able to report that the general health of the pupils in the school has been excellent. There have been no deaths and no serious sickness. A resident doctor is in charge of all cases requiring special attention, and the utmost care is exercised, at all times, by those in charge of the children to prevent colds and their attendant results. During the past year there has been a careful examination of all pupils relative to the condition of blood and sight. This work was done, under the direction of the Board of Control, by specialists who have carefully prepared data for the records of the school, and even offered to carry out their own recommendations free of charge, should there be any pupils who could not afford the treatment suggested. Many of the pupils of the school are under the care of specialists at home, and do not need to avail themselves of this offer, but for the needy ones, who, for various reasons, are not so fortunate, it is a great boon. We are hoping that the joy of restored sight may be the portion of some of our children as a result of this movement. Closely allied to this subject of restoration of sight is one that is receiving much attention throughout the entire country, i. e., the prevention of blindness. The National Committee for Prevention of Blindness, with headquarters in New York, is constantly sending out valuable matter relative to this subject. It is very gratifying to be able to report that the four states, Washington, North Dakota, Wyoming and Nebraska head the list in which there is the lowest percentage of blindness per one hundred thousand population. Our record is less than forty to the one hundred thousand. The highest is ninety or over. While this is a splendid showing, yet the following from the annual report of the Committee for Prevention of Blindness clearly shows that we are not in a position to congratulate ourselves until there is not one needlessly blind child among us.

"It is estimated that fifty per cent of all blindness is preventable. To many, this may seem too high an estimate—that one-half of all the blind people in this country need not have been blind. But it has long been known to the medical profession, and to a comparatively few others among the lay public, that more than a quarter of the pupils in the schools for the blind are sightless because their eyes were not properly treated during the first few days of life; that other children become totally or partially blind from trachoma and other eye infections, or after attacks of such infectious diseases as measles, scarlet fever, etc.; that industrial accidents cause the needless loss of many eyes; that drinking wood alcohol or inhaling its fumes in close



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places causes both blindness and death; that inadequate lighting is responsible for much visual disturbance; and that eyestrain is a serious factor in general nervous breakdowns."

To the end that the people of Washington may be informed upon this tremendously important subject, I wish to suggest that a small fund be made available, whereby the school may carry on a campaign of education by means of lantern slides, exhibits, and literature; all of which are obtainable from the National Committee for Prevention of Blindness, New York City.

Improvements.—It is gratifying to be able to report many improvements during the biennium, chief of which is the new administration building, costing \$75,000.00. This building is a fireproof structure and is ample to accommodate the pupils in classroom work for years to come. The basement contains the plunge, gymnasium, dressing rooms and manual art rooms. The first floor is devoted to administration purposes, dining rooms, and rooms for superintendent and Board of Control. The school rooms, auditorium, library, piano-practice rooms occupy the entire second floor. The third floor provides quarters for the teachers and other employees. The roof garden commands a view of the beautiful Columbia river scenery, with Mt. Hood in the distance. The building is beautiful and commodious, and compares favorably with those in much older states. The library has been enlarged by several hundred new books during the biennium, thus affording a means of information, otherwise denied a blind child, unless he can command the time of some friend to read to him. In the music department, we have purchased two new pianos, and have carried out a plan of pupil-teaching, under the careful supervision of the head of the department. We feel that this plan has been helpful in many ways. Miss Blanche Ranning of Seattle, and Miss Cecile Mitchell of Walla Walla, both advanced students in the musical department of our school, have given very satisfactory service as student-teachers, and I am glad to give them this public mention, not only because their work deserves it, because it was a labor of love on their part. Such generous, loving service for others is the finest fruitage of education. The girl's industrial department has received special attention, and the work in basketry, sewing and crocheting is evidence of the development of excellence in this very important part of a blind girl's training. In the tuning department, we have on display a piano which has been rebuilt by two young men, one of whom, this fall, receives his certificate of tuning from our department. We have secured many pianos in Vancouver for him to tune during his residence in the school, and feel that he is a thoroughly qualified tuner. The addition of an extra piano for tuning has greatly aided in the efficiency of the department from which this young man graduates. Gradually the grade of brooms made in the shop is improving. We have made seventy-five dozen brooms since we opened the shop two years ago. No extra time outside of regular class-instruction periods is given in this department. As the attend-

ance increases, and conditions allow, we would like to see every boy accorded the same opportunity as that afforded in some other states, i. e., given a fixed rate per dozen for all brooms made outside of regular class periods; this sum to remain in the school until his closing year, and then to be applied by approval of the superintendent, on an outfit for work. The reason for this being that the most difficult part of a blind man's problem in life is to secure the confidence of the seeing public that he can do anything at all. This fund bridges the gap between the opening and the successful operation of his little venture.

Teachers.—There have been no changes in the teaching force during the biennial period. This is most fortunate for the school, when we consider the ability, the training and the temperament of those employed. In nearly all our city schools teachers are paid a twelve-month salary, and the teachers of a special school should be no exception. I recommend therefore that our teachers be put on a ten-months' basis, looking to this end. Because of limited teaching force, the girls' industrial work has been carried on by several persons. Considering the press of other duties, and the limited time, the work is of a high order. However, with our increased attendance we should at once provide equipment which would enable us to add to our girls' industrial department, domestic science, ironing and weaving, and secure the services of a trained worker in all these arts. I think \$500.00 would adequately equip the vacant rooms in the basement for this use.

Social Life.—Unless constant care is taken, the tendency in an institution is for routine, even in the hours for relaxation. During the biennium much thought has been given to provide such diversions as tend to develop a love for the very best and highest pleasures. All the institution household have given themselves unreservedly to this play-work, and I feel that in a large measure the splendid spirit of the school is due to the quality of our social life. One very popular evening each month is when we entertain, as guests of honor, all who have had birthdays during the month.

Our Exhibits.—During the state fairs held at Spokane and North Yakima in the fall of 1915, our school was represented by three pupils and the matron. The demonstrations were held at intervals from ten in the morning to four in the afternoon, and a great many people witnessed the work, and thus became familiar with the scope and purpose of the school. This most excellent way of advertising a school, and its work, is always productive of good results. In fact the only way, successfully, to attract the interest of the public is by a live exhibit or moving pictures.

Policy of the School.—For eight years I was associated with my husband, the late W. B. Hall, in the Kansas School, and have had the privilege of visiting many of the best schools of the United States, so I feel sure that the policy of this institution is in line with the most advanced methods used in similar schools in this country. The train-

ing of the blind presents many difficulties, but that we, who are so near to the work may be able to better perform our tasks and more fully develop the children who come to us for guidance, we earnestly desire our continued cooperation and cordial support to the end that the new educational ideal may prevail; namely, that every man has a definite work to do, and that it is the aim of education to aid him to do his task, fit him for it, and stimulate him to do it gladly.

NEEDS OF THE SCHOOL.

Maintenance.—At present there are sixty-three pupils in the school. It is not unlikely that the attendance may reach eighty during the biennium. If the average attendance should be eighty, we could maintain the school for eighty-five cents per pupil a day for 365 days in a year. This would make the appropriation approximately \$50,000.00.

Additional Land.—As was stated in the last biennial report, additional land is the primary need of this school, if we are to plan for enlargement and efficiency. The present acreage of five and one-quarter acres is entirely inadequate to properly care for the present enrollment, sixty-three. The wood used during the winter occupies much of the space needed for playgrounds, and there is not sufficient room to plan for a garden, or girls' playground, both of which are real needs in developing a school such as this. The boys' cottage is within twenty feet of an adjoining lot in which are kept horses, cows, pigs and chickens; hence, if for no other than purely sanitary reasons, additional acreage should be procured to correct the present deplorable condition. I think an appropriation of \$10,000.00 would cover this expenditure.

Dormitories.—The cottage for boys, built five years ago was designed to accommodate twenty-eight people. Last term we were compelled to house forty-one in it. Under such conditions satisfactory results are impossible. Many new pupils are seeking admission. I therefore recommend that \$28,000.00 be appropriated with which to erect and furnish a fireproof cottage, in keeping with the other buildings on the grounds.

Kitchen.—The administration building just completed was designed to conform as nearly as possible to models of proven desirability in other states. The kitchen was purposely omitted from the building thus eliminating all food smells from school rooms. The old kitchen, which is located in the old building, 150 feet from the children's dining room, is being used until provision can be made for a more convenient one. The kitchen building should include rooms for storage, refrigeration, and overhead quarters for cooks and maids. The approximate cost of this building, with equipment, would be \$18,000.00.

Pipe Organ.—It is easy to understand that to the blind the world of sound is one of great profit and pleasure. In view of this fact I

recommend that an appropriation be made for a pipe organ to be placed in the auditorium of the new administration building. This would cost approximately \$2,000.00. It may be the means of giving to the world a David Duffie Wood. (See footnote.)

NOTE. David Duffie Wood was a little blind boy of poor parentage, who, at five years of age, entered the school for the blind of an eastern state, and ultimately became one of America's greatest organists. He was held at a high salary in a Philadelphia church for many years, and was preeminent as an interpreter of the works of the masters.

Swimming Pool.—Blindness is nearly always accompanied by a defective physical condition. For this reason it is very important that a school for the blind be equipped with every device for the development of a strong body. Swimming is one of the very best exercises for a blind child, as it develops the whole body and is taken in an element which makes a tremendous appeal to the sensitive touch of the sightless. In the basement of the administration building is a fine plunge all "roughed in." It would cost approximately \$4,000.00 to finish it, and when completed the Washington school would be in a class with the best in the country.

Broom Shop.—For the safety of the entire plant it is important that the old firetrap which has served for an administration building for many years be removed. When this is done it will take with it the quarters now occupied by the broom shop. Broom material is inflammable and should be placed in a separate building apart from the others. This shop building should include, aside from the broom shop, the tuning department, which for obvious reasons it is necessary to have away from the school building, rooms for sloyd, and knot-tying, also storage rooms for supplies. It could be built at a cost of \$18,000.00

Vacuum Cleaner.—A vacuum clearer should be installed in the new building. The piping is all in, and thus the initial cost is much reduced. Five hundred dollars would accomplish this, and during the coming biennium it would pay for itself by saving an additional maid.

Field Agent—There is one way in which a blind man may render a splendid service to his state. This is in a position known in other states as a field agent. Just as our public schools have their school visitors; our big department stores their social workers; our hospitals their followup agents; so the right kind of a blind graduate from our school employed at a regular salary could be of incalculable value to the blind of this state. His work would be to visit parents, making suggestions and explanations; to follow up discouraged pupils and encourage them; to find the young blind and report them to the superintendent, and to locate the adult blind and give them the larger outlook of a trained worker. Under the supervision of such an agent, the school might become a distributing center for material for the blind worker who has been trained by the state, but, because of inability to procure material

cept at exorbitant rates, is not able to accomplish much in the way of self support. The enlargement of this plan includes the home teacher, who is always a blind person, preferably a woman, who goes into the home, and there teaches the helpless one that life is not necessarily useless because sight is gone. In view of the possibilities of the field agency work, and the benefits to be derived from it, I recommend that provision be made for a field agent, to work under the direction of the superintendent of the School for the Blind.

Library and Musical Instruments.—By reading, the blind child acquires nearly all his knowledge, hence it is very necessary to have at his disposal a well selected library of embossed books of literature, history and fiction. Facility in reading is acquired only by the reading of many books. To induce the child to acquire this facility he must have attractive and suitable books to stimulate his interest. When we consider that a copy of David Copperfield costs, in print, ninety cents, while in Braille print, it costs \$21.00, we begin to realize that a library for the blind requires an outlay of considerable money, to secure even a small collection of books. All the children who enter the school are given instruction for a period of time in instrumental music. Where aptitude and talent warrant it, especial attention is given to develop this, a blind child, supreme gift. We have now six pianos, one of which is always in use for the teacher hearing lessons. We shall need several more pianos soon. Fifteen hundred dollars should provide moderately for books and musical instruments for the next biennium.

Repairs and Improvements. A well graded yard is a great necessity for blind children to play upon. Their natural hesitancy is much augmented if they feel that there is danger of stumbling. Our yard is in need of considerable filling in, so that walks may be permanently laid for the guidance of the children about the grounds. There should also be a retaining wall to support the terrace at the back of the new building. These improvements are greatly needed to provide for the safety of the children, and to induce them to spontaneous play. I think \$1,000.00 would cover these expenditures.

Higher Education. In June, 1916, we graduated a class of six young people from our grammar school department. These young people are planning to enter the Vancouver High School and continue their studies. Our teachers at the school will read their lessons for them, and in every way encourage them to persist until graduation. It is the acknowledged right of every child in America to have an opportunity for an education. The blind child is more restricted than any other for he cannot secure books printed in the subjects he pursues in college, and must depend upon the kindness of someone to read to him. I therefore recommend that an annual appropriation of \$300.00 per pupil be made for any blind graduate of an accredited high school in Washington, who wishes to take a college course. This sum will but furnish him with a pair of eyes.

Boiler.—With the addition of the new building, our boiler is to be taxed to its capacity much of the time. This is not wise, except for brief periods. We should have an additional boiler, which will necessitate an expenditure of \$2,500.00.

Acknowledgements.—To His Excellency, the Governor, for his gracious presence and splendid oration at the laying of the cornerstone of our new building; to the members of the State Board of Control for their cordial support and unfailing kindness at all times; to the many friends throughout the state who have spoken and written words of encouragement; to the people of Vancouver, who have so often given of their time to help our children enjoy many pleasures outside of the school; to the loyal employes who by faithful service have made possible the degree of success attained, and to the dear children of the school, who by obedience and earnest effort have made the work a joy; from my own heart and in behalf of that loved one who has entered into the larger life—to whom I owe anything that I have accomplished in this biennium—I wish to express grateful thanks.

Respectfully submitted,

SADIE E. HALL,
Superintendent.

WASHINGTON STATE PENITENTIARY

REPORT OF THE SUPERINTENDENT (WARDEN).

WALLA WALLA, WASH., September 30, 1916.

To the Honorable The State Board of Control.

GENTLEMEN: I have the honor of submitting this, the biennial report of the Washington State Prison for the period ending September 30th, 1916. Many problems of minor detail pertaining to the conduct of this institution have been dealt with by your board during the past biennial period that will not be referred to in this report for lack of space.

My administration as superintendent began April 16th, 1913, at which time the population in the prison was 904; at this date we have 662 actually confined, and in addition, still under our supervision as parole and conditional pardon subjects, 133. The prison board for the purposes of study or in an experimental way, has for the past year, been extending the parole period for a longer time before granting final release than was formerly the practice. This accounts for the larger number shown upon parole than was given in the last biennial report of 1914. It is the hope of the board that the retaining of the discharged men for a longer period under the restraint of parole supervision will be beneficial, in at least very many cases, by more firmly grounding

them in self-control and consequent improved citizenship. The released man, in nearly every case feels that his parole conditions are a handicap to his efforts to re-instate himself, and in some cases this, in a measure, is true, but in many cases this supervision is the saving factor. Whenever special cases seem to justify an earlier release action, the prison board is disposed to recommend same to the governor. In this work, like everything else, obtaining the best results, i. e., the larger percentage returned to society and saved from becoming recidivists, depends upon the tact and ability of the parole officer who has the immediate supervision of discharged prisoners. His adaptability to the work is everything, for it is not an easy, but a vexatious problem.

Institutional Problems.—Our important institutional problems are those that cannot be solved without legislative action. In my biennial report covering the period ending September 30, 1914, shown on page 39 of the Seventh Biennial Report of the State Board of Control, under topics "Profitable Industries" and "Jute Mill", together with a supplemental report I made to your Board covering a personal investigation of the industrial activities of other state penitentiaries visited while enroute to the American Prison Congress meeting held in St. Paul, Minnesota, in October, 1914, I detailed to some extent what our sister states are doing in an endeavor to afford employment to their prison population, that will be jointly profitable to the prisoner and the state. In these reports referred to, I have covered the subject matter quite as fully as I could do herein, and hence make reference to them, without repeating the same in this report. However, insomuch as the emergency for action remains equally as pressing at this time as it did two years ago, I desire to renew suggestions made in these reports, that a competent efficiency engineer or commission be authorized by the legislature to make a survey and report, covering what line of industrial procedure can be best inaugurated at this institution, to render it self-sustaining or better, and at the same time furnish a means whereby the inmates can earn some money, that will provide for their temporary necessities, when discharged, or that can possibly be used during their confinement, for the benefit of their dependent families or relatives. This is being done by other states in such a pronounced manner that their penal institutions are no longer an expense to the state, but a source of profit to all concerned. Why not Washington? The legislature is the only authority that can establish a business policy for the penitentiary.

I desire to renew the representations made in my former report in detail as found on pages 136 and 137, Biennial Report of State Board of Control, year 1914, covering the conditions and changes needed, under topics noted as "Cell Wings," "Yard Walls," "Women's Department" "Sewage." Since my last biennial report our institutional water system has been supplemented by a physical connection of a 4-inch steel riveted pipe with the Walla Walla city gravity water supply, which materially reduces our fire risk and further secures us in the event

of accidents to our pumping plant. This expense, amounting to \$680.00, was paid for out of the appropriation for repairs and improvements.

Farm.—Each succeeding year in the conduct of the prison confirms the feasibility and importance of increasing the institutional farm activities, gardening, dairying, stockraising, orcharding and general farming, to produce subsistence for inmates and feed for the stock; all offer the very best kind of employment for the prisoners, both to those who are already experienced and others who profit by being taught this work, to aid them when they are discharged.

It seems very unbusinesslike for the state to continue purchasing food products when it can produce them not only at first cost, but at the same time confer a benefit upon their charges, by affording them an opportunity to work and learn, both advantages that must be obvious to all. With about 140 acres useable land, we are now attempting to produce our requirements for garden products, maintain a dairy of 70 cows and raise 700 head of hogs, etc., which means that much of our supplies must be purchased.

We need more garden land, more orchard and fruit land and other land upon which we can raise grain for flour and feed for more stock than we now have. The institution should maintain a dairy at least sufficiently large that the annual culling of the herd would supply the institution with its beef and its dairy products; if in excess of prison demands, could be supplied to those state institutions not capable of producing their own supply. At this time such additional land contiguous to the institution can be obtained, which perhaps later could not be had equally available and perhaps not at so favorable a valuation. Should your board be advised that the legislature would give consideration to this question, I would be pleased to submit in detail, for their investigation, plans covering suggestions of desirable and possible acquisitions and plan of purchase without an immediate appropriation therefor.

In other portions of this report are found the respective reports of Mr. F. H. Butcher, secretary of the prison board, and Elder T. J. Cannon, as chaplain, which cover in detail, practically the daily workings of the prison and render it unnecessary for me to repeat herein.

Discipline.—The prison discipline during the past two years has been maintained in a manner alike satisfactory to the management and acceptable to at least a large portion of the prison body, who recognize that a reasonable discipline is an essential in prison life.

Educational Work.—The educational work of the institution has been continued along the same lines as detailed in the last biennial report. I feel that this work can be strongly supplemented, and a very considerable amount of permanent good accrue in the matter of rehabilitation of the individuals committed here, if the legislative appropriation made for the coming biennium will permit your board to add to our official working force a student of human kind, experienced

in the ways of the world and its people, who would in effect psychologically study the men, advise, counsel, direct their reading and thoughts and urge a reformed manner of life, when they are discharged to resume citizenship. Personal work in an institution of this kind is invaluable as productive of permanent results. The superintendent does not have the time for this work, even if capable.

Parole Officer.—I desire to refer in an appreciable way, to the very promising manner in which Mr. B. H. German, the recently appointed parole officer for this institution, is organizing and entering upon his duties. The parole officer's work contributes so materially to substantial results in the permanent restoration of discharged men, by wise counsel, aid and encouragement, during the parole period, that it is a potential factor in the success of any prison administration.

I further desire to express appreciation of assistance rendered by many of our citizens who are laborers in social and reform work throughout the state, as well as the lecturers and entertainers who have brought their messages of cheer and wholesome counsel. A group of Christian Science students have faithfully conducted their class work weekly, throughout the two years, with many evidences of much good. The Theosophical society has supplied many capable, strong lecturers, and supplied much reading matter. The Catholic fathers of Walla Walla have regularly administered to those of that faith, and their influence has been productive of improved men and prison conditions. I desire to especially acknowledge the assistance rendered to our parole department in the help and care extended to many paroled men, by Mrs. Maud Ballington Booth's western home for her Volunteer Prison League members, and other men sent to her from this and other institutions. Mrs. Booth's Portland manager, Mrs. Major Jessie F. Starka, has at her own expense brought her messages monthly to the institution, to the appreciation and profit of a large number of inmates.

In conclusion I desire to accord my appreciation of the assistance rendered me in my work by the governor, Hon. Ernest Lister, and to the members of the Board of Control for their uniform courtesy and support, also to the members of my official staff for their support in conducting the business and other institutional affairs.

Respectfully submitted,

(Signed) HENRY DRUM,

Superintendent.

REPORT OF STATE PRISON BOARD.

WALLA WALLA, WN., September 30, 1916.

Hon. Henry Drum, Chairman, State Prison Board.

DEAR SIR: In compliance with law, I have the honor to submit herewith the Fifth Biennial Report of the State Prison Board.

The Board consists of the following: Honorable Frank C. Morse, Honorable T. E. Skaggs, Honorable W. H. Cochran and the Superintendent of the Penitentiary, Honorable Henry Drum, Chairman, Fred H. Butcher is Secretary.

Early during this biennial period, Honorable H. W. Ross was succeeded by Honorable T. E. Skaggs and Honorable H. T. Jones, who had been a member since organization, was succeeded by Honorable W. H. Cochran. Mr. B. H. German has been appointed parole officer to succeed Mr. Ben Ludlow who resigned August 15th, 1916. This officer's duties consist of securing employment for those on parole, visiting them from time to time, adjusting their difficulties and stimulating their desires for restoration to good citizenship.

At the December, 1914, meeting, the Board paroled inmates who had been previously convicted, this being a departure from the prior custom of considering only first offenders eligible for such consideration. This procedure has been highly successful as proved by the percentage of violations which has not been increased in consequence.

Another beneficial change, first put in practice May, 1915, and since followed, is that those recommended for service at the rock quarries have at the time of their selection, had the time fixed when they would receive final release in the event of satisfactory service and good conduct. In computing the date of final release ten days time per month is deducted from sentence in consideration of arduous work. Much dissatisfaction has been eliminated by this salutary procedure, the output of the quarries indicates marked increase and a material lessening of the number of escapes has resulted.

Formerly six months reporting upon parole was generally regarded as adequate to insure the recommendation for final release; the Board now believes that in many cases a year is a better standard as further guarantee toward rehabilitation.

The Board authorized the superintendent of the penitentiary to issue permits in worthy parole cases to enable them to pursue legitimate avocations in other states as the needs required; in this way formalities requiring time have been abandoned and quick action resulted for the benefit of the paroled.

The Prison Board has flexibly operated its rules in cases in which the rigid enforcement of them would result in hardship.

Respectfully submitted,

(Signed) FRED H. BUTCHER,

Secretary, State Prison Board.

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REPORT OF CHAPLAIN.

WALLA WALLA, WN., September 30, 1916.

Hon. State Board of Control, Olympia, Washington.

SIR: I herewith submit my report for the year beginning October 1st, 1915, and ending September 30th, 1916.

Since I assumed the duties of chaplain, I have conducted services in the auditorium every Sunday morning. Musical selections rendered by the W. S. P. orchestra and band, as well as by some of the very best local talent I could secure for this purpose, have contributed their share toward the general edification of the inmate body. The religious exercises being always attended, and whenever possible, have been followed at the close of the service by a display of motion pictures secured from local playhouses.

I am at present engaged in an attempt at reorganizing into an active body, devoted to christian-fellowship and practices, all inmates who have previously pledged themselves as members of the V. P. L. (Volunteer Prison League) an intramural organization founded some years ago by Mrs. Maud B. Booth of the Volunteers of America, headed by Ballington Booth as president, and Major Jessie F. Starks of Portland, Oregon, as local representative. Her monthly visits to this institution are looked forward to by many inmates with eager anticipation. Her kind ministrations and practical christian endeavors to act as a first friend to men released on conditional pardons or paroles have endeared her and her work to inmates generally.

During the past year the local branch of the Salvation Army has various times conducted meetings in the Auditorium.

Christian Science services formerly held in the library are now being conducted in the auditorium by members of that body. Increased attendance on the part of inmates requiring a larger meeting place.

At different times, services have been held by Catholic priests for the benefit of inmates belonging to that faith.

During the past year the library has been reorganized, renovated and enlarged, additional shelf space having been secured, thus creating room for some 1,500 new and second-hand volumes purchased and donated during that time. All books have been carefully examined, classified and arranged according to subject matter, title and author. A printed catalogue of one hundred and four pages has been issued and delivered to every cell, and to the various departments of the institution, thus making the contents of the library known to all inmates. A systematic and thorough distribution of books marks the present order of the day. The former weekly "hit and miss system of distribution and selection of books" has been displaced by an up-to-date card system,—enabling inmates to make their own selections from

the catalogue, and order books desired upon their cards. I am please to note that the demand for books other than fiction is on the increase but regret to observe that the supply as to kind and variety of book requested is totally inadequate to meet the demands,—especially books of a technical nature wherewith the library is not supplied. For instance, books on present day methods of scientific farming and agriculture, horticulture and arboriculture, poultry and stock raising, as well as text-books on civil, mechanical and electrical engineering are constantly in demand. I most urgently recommend that something be done in the near future to acquire books of that nature. I fully realize, however, that the \$500.00 at present allowed biennially for the purchase of books is totally inadequate to meet the growing demand made upon the library, and that the acquisition of scientific text books above described, which are usually high priced is out of the question unless there be a substantial increase in the present allowance.

I also observe that many of the books of standard authors of fiction, constantly in demand, have been in circulation for many years and should be replaced by new ones. The wear and tear to which the books are subjected appears to be very great and the facilities and tools at hand for rebinding and repairing same are decidedly primitive.

Our View Point, the monthly magazine published by the inmates of the institution, is just entering upon its fourth year. Its prestige and influence is steadily increasing and its effect in educating the public on matters pertaining to prison reform is undoubtedly great. It is widely quoted by newspapers and periodicals throughout the state and is generally considered to be the best prison paper in the country. Much of its value as an exponent of prison conditions is due to the fact that it is virtually uncensored and that none of its utterances are inspired or suggested by any of the officials.

The print shop, in addition to printing our View Point, turns out many forms and blanks for use in the different departments of the institution, thus saving hundreds of dollars per annum, without taking into consideration the cost of labor employed.

The supervision, inspection and perusal of all incoming and outgoing correspondence of inmates consumes the greater portion of my time. About 3,500 letters per month are sent and received. All letters are carefully read, and a record kept of all addresses. Requests for special letters are freely granted in case of sickness, accident or death and in all matters of importance pertaining to business or domestic affairs, as well as to enable inmates to secure employment, transportation, etc., in the event of final releases, conditional pardons or paroles.

Since I assumed the office of chaplain and the duties therewith, I have interviewed from 50 to 60 inmates per month. In no instance have I refused such request. Relative to the subject matter of interviews granted, I wish to state that the same has ranged from religious to legal and domestic questions and affairs.

I understand the night school held in this institution is being fairly well attended, there being an enrollment of about one hundred and twenty-five pupils. The warden's secretary, Mr. Butcher, acting as principal assisted by a corps of inmates qualified to act as instructors. The subjects taught comprise elementary training, reading and arithmetic. A class in drawing has been organized.

I have visited the hospital at least three times each week or oftener if necessary. I have found many opportunities to minister to the inmates confined there and have been called upon to write letters in behalf of some unfortunate inmates physically or mentally unable to communicate with relatives or friends.

I have visited the woman's department and found the inmates confined there in a receptive mood for both spiritual counsel and religious advice.

In conclusion I beg to express to you and all officers my appreciation for kind co-operation and the uniform courtesy extended to me in the discharge of my duties.

Respectfully submitted,

(Signed) T. J. CANNON, *Chaplain.*

REPORT OF PRISON PHYSICIAN.

WALLA WALLA, WN., September 30, 1916.

Hon. Henry Drum, Superintendent State Penitentiary.

SIR: I submit the attached medical report for the biennial period October 1, 1914, to September 30, 1916, with the following recapitulations and recommendations.

Epidemics.—There have been no serious epidemics during the period. There has been one mild epidemic of influenza.

Deaths.—There have been eight deaths, four due to tuberculosis.

Tuberculosis.—There have been seventeen cases of open pulmonary tuberculosis.

Typhoid.—There have been no cases of typhoid fever during the period.

Prophylaxis Anti-Typhoid Bacterin.—Eight hundred and fifty-five inmates have been immunized with anti-typhoid bacterin. All inmates are given this anti-typhoid bacterin on entrance.

Syphilis.—Sixty-five cases of syphilis were treated during the period. Fifty-five were isolated until treatment became effective. September 30, 1916, there are only three syphilitic cases isolated. There are forty-five inmates on treatment for syphilis.

Surgical Operations.—Sixty-seven major operations have been performed at the hospital during this period.

Malnutrition of Inmates.—There have been no serious cases of malnutrition during the period.

Psychological Study of Inmates.—I have commenced a systematic study of the mental condition of inmates and the factor of environment, heredity, anatomical stigmata and physiological stigmata.

Sanitation.—The buildings are in a fair sanitary condition.

Water Supply.—Good.

Food Supply.—The food supply has been of sufficient quality and quantity for sustenance and for the performance of an average day's work.

Recommendations—Building for Tubercular Patients.—I recommend that a small building be constructed outside the main walls for treatment of inmates suffering with open pulmonary tuberculosis. The present ward assigned to tubercular patients is small and inadequate for the treatment of this disease.

These patients should be isolated and it is impossible to do so within the prison hospital.

Respectfully,
(Signed) BERT LOGAN JONES, M. D. C. M.,
Prison Physician.

DEATHS.

Number	DIAGNOSIS	Date of Death	Admitted to Hospital	Received at Institution
186	Pulmonary tuberculosis	3-22-15	5- 5-14	2-15-14
544	Diabetes mellitus	4-16-15	2-20-15	1- 4-15
432	Gun shot wound in head.....	5- 6-15	10-21-14	10-21-14
792	Pulmonary tuberculosis	2-10-16	12-23-15	7-30-15
185	Pulmonary tuberculosis	4- 3-16	1- 6-16	7-24-11
715	Pulmonary oedema complicating pulmonary tuberculosis	5-27-16	5-27-16	5-29-15
716	Chronic myocarditis	6- 6-16	3-25-16	11-25-12
814	Pulmonary tuberculosis	3-22-16	4- 3-16	8-17-15

Totals deaths this biennial period..... 8
Total deaths last biennial period.....10

INMATES TRANSFERRED TO MEDICAL LAKE.

Number	Date of Transfer	Received at Institution
950	12- 8-14	7-23-13
067	12- 8-14	11-12-13
343	12- 8-14	8- 8-14
404	12- 8-14	10- 4-14
989	2-24-15	5- 6-13
524	2-24-15	12-23-14
029	6-21-15	10-10-13
580	6-21-15	2- 6-15
624	6-21-15	3-13-15
910	10- 8-15	10-20-05
408	10- 8-15	10- 4-14
465	1-29-16	11-19-14
753	2-23-16	6-22-15
653	6-23-16	9-29-12
665	6-23-16	4- 9-15
842	6-23-16	9-30-15

Total inmates transferred to Medical Lake this biennial period..... 16
Total inmates transferred to Medical Lake last biennial period..... 32
Criminal insane received in institution during biennial period..... 4
Criminal insane discharged from institution during biennial period..... 3
Criminal insane in institution September 30, 1916..... 1
Criminal insane in institution September 30, 1914..... 1
Total inmate population September 30, 1916..... 701
Total inmate population September 30, 1914..... 730

MEDICAL CASES TREATED IN HOSPITAL.

DIAGNOSIS	This Biennium	Last Biennium
Adentia	1	
Aortic regurgitation	1	
Aphasia	1	
Asthma	5	
Arthritis	1	
Attacks of confusion	5	
Anuria	1	
Acute rheumatism	8	
Blepharitis	2	1
Bronchitis, chronic	2	6
Colic	1	
Colitis	1	
Convulsions	2	
Conjunctivitis	2	1
Constipation, chronic	28	
Cystitis	3	3
Dacrocystitis	2	
Dementia	7	2
Diabetes	4	1
Diabetes insipidus	1	
Dyspnoea	1	
Eczema	2	
Epileptoid attack	1	1
Epistaxis	2	1
Erysipelas	1	2
Erythema	4	1
Floating kidney	1	
Furunculosis	2	
Gastric crisis	2	
General debility	9	17
Gonorrheal arthritis	2	
Hemorrhage, urethral	1	
Hemorrhage bowels	1	
Indigestion, acute	5	5
Influenza	7	7
Incipient tuberculosis	2	9
Iritis	1	
Jaundice	1	
Laryngitis, acute	1	1
Lymphangitis	1	
Lymphocystosis	1	
Melancholia	1	
Migraine	1	
Myocarditis, chronic	11	
Nephritis, acute	4	1
Neuralgia	1	4
Neuritis	2	2
Neurosis	4	
Otitis media	6	
Oedema, scrotum	1	
Orchitis	1	
Pleurisy, acute	2	4
Pleurisy, chronic	1	
Phimosis	1	
Pulmonary oedema, complicating pulmonary tuberculosis	1	
Pulmonary tuberculosis	18	8
Peptic ulcer	1	
Polyuria	1	
Pruritis	1	
Partial suffocation by gas	1	
Syphilis (total cases)	65	2
(confined to syphilitic corridor	55)	
(discharged from syphilitic corridor	52)	
(remaining in syphilitic corridor September 30, 1916	3)	
Tachycardia	1	
Toxodema	1	
Urethritis, chronic	1	

SURGICAL CASES TREATED IN HOSPITAL.

DIAGNOSIS	This Biennium	Last Biennium
abscess	1	
abscess, chronic, back	1	
abscess, perirectal	1	
abscess, tuberculous	1	
apendicitis	3	
corneal ulcer	1	
contusions	10	
furunculitis, finger	3	1
furunculitis, scrotum	1	
furunculitis, submaxillary	1	
cataract	1	
fracture in skull	1	
dislocation left hip, old	1	
deviation nasal septum	1	
enlarged thyroid	2	
enlarged cervical nodes	1	
enlarged spleen	1	
ectopia recti	2	
fracture, radius	1	
fracture, ribs	2	2
fracture, clavicle	3	1
fracture, fibula	1	2
fracture, nose	1	2
fracture, left patella	2	
hemorrhage, traumatic	3	
hematoma, left eye	1	
head shot wound	4	3
hemorrhoids	14	2
hemorrhoids, inguinal	21	4
hemorrhoids, ventral	1	
hemorrhoids, scrotal	1	
hemorrhoids, disease	1	
hemorrhoids, proctitis	3	4
ectopic stump, leg	1	1
hemorrhoids	5	16
osteitis right carpal and metacarpal bones	1	
osteitis	1	
opening in soft palate	1	
oral papilloma	1	
ulcer, discharging	5	
fractured ankle	1	1
fractured knee	1	
fracture in eye	2	
hemorrhaphy	1	
traumatic partial amputation finger	1	
tuberculosis nodes	4	
tumor of breast	1	
descend d'testicle	1	1
hemorrhoids	3	1
urethral stricture	2	
varicose veins	3	1
varicocele	2	
osteomyelitis	1	
hemorrhaphy popliteal nerve	1	
osteitis bone	2	2

MAJOR OPERATIONS.

Num- ber	OPERATION FOR	Date of Operation	Received at Insti- tution	Where Working
6,783	Inguinal hernia	9-23-14	2- 2-13	Released
7,069	Inguinal hernia	10-17-14	12- 8-13	Released
6,646	Hemorrhoids	11- 7-14	9-26-13	Released
7,194	Hemorrhoids	11- 7-14	2-27-14	Released
7,190	Scrotal hernia	10- 7-14	2-21-14	Released
6,791	Sinus lower and right tibia	12- 2-14	2-14-13	Released
6,995	Inguinal hernia post operative	12- 2-14	9-14-13	Released
5,107	Sinus left forearm	12- 2-14	10- 4-08	Released
7,453	Hydrocele	1- 6-15	11-14-14	Released
7,284	Inguinal hernia	1- 6-15	5-25-14	Released
6,894	Inguinal hernia	1-12-15	5-22-13	W. S. P.
7,429	Inguinal hernia	1-12-15	10-11-14	Released
7,505	Adhesions	1-24-15	12- 9-14	Released
7,574	Neurorrhaphy popliteal nerve	2- 6-15	1-30-15	Released
6,761	Inguinal hernia	2- 6-15	1- 1-13	Escaped 9-1-16
7,337	Necrosis right femur	2-11-15	7- 9-14	Released
7,076	Tuberculous nodes	2-11-15	11-16-13	Released
5,514	Hemorrhoids	3-18-15	9-22-09	Released
6,658	Hemorrhoids	3-18-15	10- 3-12	Dixie quarry
6,305	Hemorrhoids	3-18-15	12- 8-11	W. S. P.
7,597	Ventral hernia	4- 1-15	2-22-15	Released
6,426	Tuberculous nodes	5-22-15	2-21-12	Released
7,692	Inguinal hernia	7- 1-15	4-29-15	Released
7,581	Inguinal hernia	7- 1-15	2- 6-15	W. S. P.
7,590	Rectal pailoma	7- 1-15	2-22-15	W. S. P.
7,743	Tumor of breast	7-22-15	6-16-15	W. S. P.
7,756	Inguinal hernia	7-22-15	5-22-15	Dixie quarry
7,381	Tuberculous nodes	7-29-15	9- 5-14	Patient in hospital
6,747	Hemorrhoids	9-19-15	12-22-12	W. S. P.
7,819	Inguinal hernia	9-23-15	8-23-15	Meskill quarry
7,687	Inguinal hernia	9-23-15	4-23-15	W. S. P.
6,344	To close opening in soft palate	9-23-15	1- 6-12	W. S. P.
6,497	Inguinal hernia	9-30-15	4- 6-12	Released
7,800	Varicose veins	9-30-15	4-20-15	W. S. P.
7,855	Undescended testicle	11- 6-15	10- 9-15	W. S. P.
7,756	Hydrocele—right testicle removed	11- 6-15	6-22-15	Released
7,804	Tuberculous abscess—testicle removed	12- 6-15	8-18-15	W. S. P.
7,927	Glaucoma left eye	1- 2-16	12-13-15	W. S. P.
7,316	Inguinal hernia	1-29-16	6-23-14	Released
7,474	Inguinal hernia	2-17-16	11- 2-15	Released
7,265	Hemorrhoids	1-29-16	5-13-14	W. S. P.
7,670	Inguinal hernia	2-17-16	2- 4-15	W. S. P.
7,381	Tuberculous nodes	2-17-16	9- 5-14	Patient in hospital
7,663	Old dislocation hip	2-24-16	3-19-15	W. S. P.
7,261	Hemorrhoids	2-24-16	5- 1-14	Released
7,687	Varicose veins	3- 8-16	4-23-15	W. S. P.
7,749	Inguinal hernia	3- 8-16	6-20-15	W. S. P.
7,829	Hemorrhoids	5-16-16	9-10-15	W. S. P.
7,890	Hemorrhoids	5-16-16	11- 7-15	W. S. P.
8,007	Varicocele	5- 4-16	1-24-16	Released
7,040	Bone transplantation to repair defect in skull	5-25-16	3-15-15	Patient in hospital
7,944	For ectropion—due to gun shot wound	6-22-16	11- 6-15	W. S. P.
7,994	Necrosis left humerus	6-22-16	1-17-16	W. S. P.
6,806	Hemorrhoids	6-27-16	3- 2-13	W. S. P.
8,101	Inguinal hernia	6-29-16	6- 9-16	W. S. P.
7,359	Inguinal hernia	6-29-16	8-15-14	W. S. P.
7,988	Hemorrhoids	7-12-16	1- 7-16	W. S. P.
8,091	Osteitis of carpal and metacarpal bones	7-13-16	5-19-16	Patient in hospital
6,624	Hydrocele	8-24-16	8- 4-12	W. S. P.
7,258	Hemorrhoids	8-24-16	5- 1-14	W. S. P.
7,956	Deviation of nasal septum	9-14-16	1- 7-16	W. S. P.

Major Operations—Continued.

Number	OPERATION FOR	Date of Operation	Received at Institution	Where Working
1,702	Inguinal hernia	9-14-16	1- 6-15	W. S. P.
8,238	Hemorrhoids	9-14-16	10-22-11	W. S. P.
8,025	Varicocele	9-27-16	3- 7-16	Patient in hospital
7,718	Varicose veins	9-27-16	5-29-15	Patient in hospital
8,749	Neurosis	9-27-16	12-29-12	W. S. P.

RECAPITULATION.

	This Biennium	Last Biennium
Total major operations.....	67	25
Total minor operations.....	140	30
Total received in hospital.....	472	275
Total discharged from hospital.....	444	249
Total remaining in hospital September 30, 1916.	28	16
Total hospital treatments.....	980	.....
Total prescriptions filled	12,148	18,625
Total teeth extracted.....	188	69
Total urine examinations.....	478	60
Total sputum examinations.. ..	82	47
Total blood examinations.	8	.....
Total diagnostic tuberculin tests.....	8	.....
Total Salvarsan treatments for syphilis.....	43	3
Total surgical dressings	656	.....
Total officers treated	253	.....
Total officers given prophylactic injections anti-typhoid bacterin..	24	.....
Total inmates given prophylactic injections anti-typhoid bacterin..	855	.....

There have been no serious epidemics during the period. The general health has been good.

Respectfully submitted,
 BEST LOGAN JONES, M. D.
 Prison Physician.

Table No. 1.—POPULATION.
STATISTICS OF PRISON POPULATION FOR TWO YEARS ENDING SEPTEMBER 30, 1916.

MONTHS Commencing Octo- ber 1, 1914, and ending September 30, 1916.	From Court		Escapes Captured and Returned.....	Returned from Condi- tional Pardon.....	Returned from Court.....	Returned from Insane Asylum.....	Received from Monroe Reformatory.....	Returned from Monroe Reformatory.....	Totals.....	Deported.....	Pardoned.....	Conditional Pardon.....	Taken to Monroe Reformatory.....	Taken to Insane Asylum..	Escaped.....	Sentence Commuted, Final Release from Parole.....	Died.....	Order of Court.....	Expiration of Sentence		Totals.....
	Male.....	Female.....																	Male.....	Female.....	
October, 1914.....	44	1	3	5	1	1	2	1	52	1	1	3	1	1	2	22	1	1	1	3	28
November, 1914.....	43	1	2	2	1	1	2	1	51	2	1	5	4	1	1	23	1	1	1	1	28
December, 1914.....	46	1	2	1	1	1	1	1	54	1	1	1	1	1	1	23	1	1	1	1	34
January, 1915.....	35	1	1	1	1	1	1	1	38	1	1	1	1	1	1	8	1	1	1	1	5
February, 1915.....	24	2	1	1	2	1	1	1	33	1	1	2	2	1	1	1	1	2	1	1	10
March, 1915.....	29	1	1	1	1	1	1	1	35	7	2	1	1	1	1	3	1	1	1	1	10
April, 1915.....	46	1	1	1	1	1	1	1	47	1	2	1	1	1	1	1	1	1	1	1	10
May, 1915.....	33	1	1	1	1	1	1	1	38	1	1	1	1	1	1	56	1	1	1	1	4
June, 1915.....	35	2	1	1	1	1	1	1	39	1	1	73	3	1	4	2	1	1	1	1	4
July, 1915.....	31	1	1	1	3	1	1	1	35	1	1	1	1	1	1	3	1	1	1	1	7
August, 1915.....	22	1	1	3	1	1	4	1	30	1	1	38	1	1	2	1	1	1	1	1	7
September, 1915.....	30	1	1	1	2	1	4	1	38	1	1	1	1	1	2	2	1	2	1	1	69
October, 1915.....	27	1	1	1	1	1	4	1	32	1	1	1	2	2	2	77	1	1	1	1	9
November, 1915.....	25	1	4	1	1	1	1	1	32	1	1	2	2	2	2	17	1	1	1	1	23
December, 1915.....	42	1	2	1	2	1	5	1	51	1	1	25	1	1	1	11	1	1	1	1	36
January, 1916.....	40	1	2	1	1	1	2	1	46	1	1	1	1	1	1	15	1	1	1	1	43
February, 1916.....	24	1	1	1	1	1	1	1	27	1	1	1	1	1	1	44	2	2	1	1	18
March, 1916.....	27	1	1	1	1	1	1	1	29	1	1	1	1	1	2	9	1	1	1	1	49
April, 1916.....	23	2	1	1	1	1	1	1	26	1	1	25	1	1	2	4	1	1	1	1	46
May, 1916.....	21	1	1	1	1	1	1	1	23	1	1	1	1	1	1	19	1	1	1	1	32
June, 1916.....	21	1	2	1	1	1	2	1	23	1	1	1	3	1	1	1	1	1	1	2	30
July, 1916.....	17	1	1	1	1	1	1	1	19	1	1	1	1	1	1	2	2	1	1	1	11
August, 1916.....	12	1	2	1	1	1	2	1	16	1	1	1	1	1	1	1	1	1	1	1	11
September, 1916.....	2	1	1	1	1	1	1	1	9	1	1	2	1	1	1	2	1	1	1	1	13
Totals.....	699	16	30	23	17	1	24	1	810	22	10	262	16	16	35	371	9	19	30	1	754

Table No. 2.

SHOWING NUMBER OF CONVICTS IN PENITENTIARY FOR TEN YEARS ENDING SEPTEMBER 30, 1916.

DATE	Prisoners	Received	Released	Average Attendance	Per Cent. Increase	Per Cent. Decrease
September 30, 1907.....	887	359	312	882.81	7.04	.....
September 30, 1908.....	1,016	495	396	970.8	9.967	.....
September 30, 1909.....	1,121	423	318	924.55	.....	4.77
September 30, 1910.....	901	395	555	733.23	.....	20.69
September 30, 1911.....	815	415	501	609.76	.....	18.06
September 30, 1912.....	951	455	320	771.07	26.67	.....
September 30, 1913.....	840	375	483	823.08	8.04	.....
September 30, 1914.....	789	414	515	757.29	.....	9.097
September 30, 1915.....	839	439	345	854.45	14.15	.....
September 30, 1916.....	795	321	409	831.73	.....	3.785
Totals.....	.....	4,085	4,128	8,169.77	.....	.....

Average number of convicts for ten years—816.97.

Table No. 3.—COUNTY.

SHOWING NUMBER OF CONVICTS FROM DIFFERENT COUNTIES FOR TWO YEARS ENDING SEPTEMBER 30, 1916.

COUNTIES	Present October 1, 1914	Received During Two Years	Discharged During Two Years	Present September 30, 1916
Alameda	14	(+2) 11	(+1) 11	14
Alameda	5	6	2	4
Alameda	16	(+2) 11	(+1) 10	11
Alameda	1	6	8	4
Alameda	15	11	(+1) 18	17
Alameda	4	(+1) 6	8	2
Alameda	6	7	7	3
Alameda	4	.....	3	1
Alameda	3	4	4	3
Alameda	11	(+1) 12	(+1) 12	11
Alameda	7	1	(+1) 5	3
Alameda	22	22	21	23
Alameda	8	8	3	.....
Alameda	8	.....	3	.....
Alameda	195	(+7) 210	(+12) 200	206
Alameda	4	6	6	4
Alameda	32	21	(+2) 28	25
Alameda	.....	6	4	2
Alameda	23	(+2) 30	(+3) 30	23
Alameda	4	16	11	9
Alameda	1	2	1	2
Alameda	11	9	12	8
Alameda	1	7	5	3
Alameda	5	4	4	5
Alameda	87	(+5) 67	(+1) 72	82
Alameda	1	.....	1	.....
Alameda	16	25	(+1) 14	28
Alameda	4	.....	.....	4
Alameda	27	(+11) 49	(+2) 23	53
Alameda	107	(+3) 128	(+3) 100	135
Alameda	11	12	14	9
Alameda	14	11	14	11
Alameda	1	.....	1	.....
Alameda	19	(+3) 27	(+3) 20	26
Alameda	19	(+2) 28	(+1) 23	24
Alameda	18	16	15	19
Alameda	29	(+1) 26	(+2) 37	28
Totals.....	789	(30) 810	(35) 754	795

Escapes returned. * Escapes.

Table No. 4.—CRIMES.
SHOWING CRIMES COMMITTED BY CONVICTS FOR TWO YEARS
ENDING SEPTEMBER 30, 1916.

CRIMES CONVICTED OF	Present October 1, 1914	Received During Two Years	Dis- charged During Two Years	Present Sep- tember 30, 1916
Abduction	1	3	1	3
Abortion		1	1	
Abuse of female child.....	1			1
Accepting earnings of a prostitute.....		3	2	1
Adultery	1	2	1	2
Arson	2	1		3
Arson, second degree.....	3	3	7	4
Asking, accepting and receiving a bribe.....		1	1	
Assault to commit murder.....	1			1
Assault to commit robbery.....	1			1
Assault to commit sodomy.....	1			1
Assault in the first degree.....	24	12	18	18
Assault in the second degree.....	37	40	52	25
Assault, second degree, intent to commit sodomy..		1		1
Assault and battery.....		1		1
Assisting prisoner to escape.....	1			1
Attempt to commit burglary.....	1	3	4	5
Attempt to commit forgery.....		1		1
Attempt to commit larceny.....	4		4	
Attempt to commit murder.....	1	1	1	1
Attempt to commit rape.....	3		2	1
Attempt to commit robbery.....	9	8	6	11
Attempt to commit sodomy.....	2		2	
Attempt to assault, second degree.....		2		2
Attempt to commit a felony.....	2			2
Attempt to sell liquor to Indians.....	1	3	4	
Attempted carnal knowledge of female child.....	2	4	2	4
Bigamy	3	5	7	1
Blackmail	2		1	1
Burglary, first degree.....		5	5	
Burglary, second degree.....	102	182	201	143
Carnal abuse of female child.....	2	2		4
Carnal knowledge of female child.....	7	18	6	19
Carnal knowledge of children.....	1			1
Carnal knowledge of a horse.....		1		1
Conniving at prostitution of wife.....		2		2
Crime against nature.....	1		1	
Breaking jail		1		1
Drawing no fund check.....	1			1
Embezzlement by larceny.....	1		1	
Extortion	1		1	
Forgery in the first degree.....	61	101	90	72
Forgery in the second degree.....	12	2	2	12
Escaping from prison.....		2	1	1
Gambling	1	1	1	1
Grand larceny	124	198	187	135
Habitual criminal	9	5	3	11
Incest	9	4	3	10
Insane criminal		4	3	1
Larceny		2		2
Larceny from the person.....	4	1	2	3
Larceny by bailee.....	1			1
Living with a prostitute.....		2	2	
Living off earnings of a prostitute.....	1	1		2
Manslaughter	19	13	8	24
Making false statement of assets and liabilities of bank		4	1	3
Misappropriation of public funds.....		1		1
Misappropriation of state funds.....	1		1	
Murder in the first degree.....	23	18	3	32
Murder in the second degree.....	54	11	12	53

Table No. 4.—CRIMES—Continued.

OWING CRIMES COMMITTED BY CONVICTS FOR TWO YEARS
ENDING SEPTEMBER 30, 1916.

CRIMES CONVICTED OF	Present October 1, 1914	Received During Two Years	Dis- charged During Two Years	Present Sep- tember 30, 1916
Obtaining money under false pretenses.....	2	.....	2	.....
Obtaining goods under false pretenses.....	1	.....	.....	1
Forgery.....	2	2	2	2
Keeping female in house of prostitution.....	■	3	1	4
Swiping.....	1	1	1	.....
.....	15	5	11	9
Receiving and selling stolen property.....	1	2	1	2
Receiving money in insolvent bank.....	2	4	6	.....
Embezzlement.....	85	80	47	118
Obtaining from the person.....	.....	2	.....	2
Obstruction.....	.....	1	1	.....
Serving intoxicating liquor to an Indian.....	7	8	12	8
Serving intoxicating liquor to an Indian.....	.....	1	1	.....
Forgery.....	20	12	17	14
Using a forged instrument.....	4	1	2	3
Assault or maiming.....	.....	1	.....	1
Totals.....	739	310	754	795

Table No. 5.—TERM OF SENTENCE.

OWING LENGTH OF SENTENCE OF CONVICTS FOR THE TWO
YEARS ENDING SEPTEMBER 30, 1916.

STRAIGHT SENTENCES	Present October 1, 1914	Received During Two Years	Dis- charged During Two Years	Present Sep- tember 30, 1916
Eighteen months.....	.....	1	.....	1
Eight 1 year.....	1	2	3	.....
Eight 2½ years.....	1	1	1	1
Eight 5 years.....	1	1	1	1
Eight 14 years.....	1	.....	.....	1
Eight 15 years.....	2	.....	2	.....
Eight 20 years.....	3	.....	2	1
Eight 25 years.....	1	.....	1	.....
Eight 30 years.....	1	.....	.....	1
Eight life.....	40	25	10	55
Eight death to life.....	6	.....	.....	6
Original insane.....	.....	4	3	1
Indeterminate sentences.....	682	776	731	727
Totals.....	739	810	754	795

Table No. 6.—TERM OF SENTENCE.
SHOWING LENGTH OF SENTENCE OF CONVICTS SENTENCED
UNDER THE INDETERMINATE SENTENCE LAW SINCE ITS
ENACTMENT TO SEPTEMBER 30, 1916.

SENTENCE		Present October 1, 1914	Received During Two Years	Dis- charged During Two Years	Present Sep- tember 30, 1916
MINIMUM—	MAXIMUM—				
Six months	One year	3	8	11	2
Twelve months	Twelve months	2	1	1	3
Six months	Two years	3	7	7	4
One year	Two years	9	9	14	1
Two years	Two years	1			6
One year	Three years	5	7	6	3
One year	Four years	1	2		3
Six months	Five years	2	6	5	3
One year	Five years	18	14	20	12
Eighteen months	Five years	3	2	2	3
Two years	Five years	8	12	11	9
Two and half years	Five years	3	3	1	5
Three years	Five years	5	8	4	9
Four years	Five years	1	2		3
Five years	Five years	2	1	2	1
Five years	Five and half years	4	3	3	4
One year	Six years	1		1	
Five years	Six years	12	11	6	17
One year	Seven years	1	1	2	
Three years	Seven years	1		1	
Five years	Seven years	5	5	6	4
One year	Seven and half years	2	4	3	3
Six months	Seven and half years	2	1	2	1
Five years	Eight years	6	2	2	6
Five years	Nine years	1		1	
Six months	Ten years	5	14	10	9
One year	Ten years	20	32	32	20
Eighteen months	Ten years	1	3		4
Two years	Ten years	15	18	22	11
Two and half years	Ten years	2	3	2	3
Three years	Ten years	10	8	8	10
Three and half years	Ten years	2		2	1
Four years	Ten years	2	1	2	1
Five years	Ten years	49	45	29	65
Nine years	Ten years	2			2
Five years	Twelve years	3	1	2	2
Seven years	Twelve years	1			1
One year	Twelve years	2	1	3	
Six months	Fourteen years	1		1	
One year	Fourteen years		4	4	1
Eighteen months	Fourteen years		1		1
Five years	Fourteen years	2		2	
Ten years	Fourteen years	2			2
Six months	Fifteen years	36	61	74	23
Nine months	Fifteen years	2	3	2	3
One year	Fifteen years	120	170	179	111
Eighteen months	Fifteen years	3	12	9	6
Two years	Fifteen years	25	25	26	24
Two and half years	Fifteen years	5	12	5	12
Three years	Fifteen years	21	24	19	26
Four years	Fifteen years	9	10		15
Five years	Fifteen years	48	26	32	42
Five and half years	Fifteen years		1		1
Six years	Fifteen years	2		2	
Seven years	Fifteen years	2			12
Ten years	Fifteen years	10	7	5	1
Ten years	Seventeen years		1		5
Six months	Twenty years	5	12	12	5
Nine months	Twenty years	1	1	1	1

Table No. 6.—TERM OF SENTENCE—Continued.

SENTENCE		Present October 1, 1914	Received During Two Years	Dis- charged During Two Years	Present Sep- tember 30, 1916
MINIMUM—	MAXIMUM—				
year	Twenty years	22	35	37	40
teen months	Twenty years		3		3
years	Twenty years	15	8	10	13
years	Twenty years	9	4	6	7
years	Twenty years	3	2	2	2
years	Twenty years	33	20	17	41
years	Twenty years	2	2	1	3
years	Twenty years	1			1
years	Twenty years	18	5	4	19
years	Twenty years	1			1
years	Twenty years	1	1		2
years	Twenty-five years	3	3		6
years	Twenty-five years	8	2		10
years	Thirty years	3	5	2	6
years	Thirty years	3	1	1	3
years	Thirty years	2	1		3
years	Forty years	4		1	3
years	Forty-five years	1			1
years	Sixty-five years	1			1
years	Ninety years	1			1
years	Ninety-nine years	1			1
years	Life	1	1	1	1
years	Life	3			3
years	Life	1		1	
years	Eight years	1		1	
years	Eight years	1	1	1	1
years	Life	1		1	
years	Nine years	1	1	2	
years and half years	Twenty years	2	3	1	4
years	Six years	1	2	2	1
years	Ten years		2	1	1
months	Ten years		1	1	
months	Twenty years		1	1	
months	Three years		5	3	2
years and half years	Seven and half years		1		1
years	Eight years		1	1	
years	Ten years		2		2
years and half years	Ten years		1		1
years	Twenty-five years		1		1
years and half years	Fifteen years		1		1
years	Five years, one month		2		2
less than three years and six months			1		1
less than one year		7	5	12	
less than two years		3	1	1	3
less than three years		3		2	1
less than five years		1		1	
more than six months		1		1	
more than one year		1		1	
more than fifteen years		1			1
months	Eighteen months	2	3	4	1
months	Fifteen years	2	1	2	1
years	Twelve years	1		1	
years	Five years	1			1
months		1		1	
years and half years	Fifteen years	1			1
more than twenty years			1		1
years	Five years one day		5	2	3
years	Four years		2		2
years	Five years, three months		1		1
months	Ten years		1	1	
months	Three years		2	1	1
less than six months			1	1	

Table No. 6.—TERM OF SENTENCE—Continued.

SENTENCE	Present October 1, 1914	Received During Two Years	Dis- charged During Two Years	Present Sep- tember 30, 1916
MINIMUM—				
MAXIMUM—				
Six months		1	1	.....
Five years		1		1
Six months		2	1	1
Ten months		1		1
Ten years		1		1
Ten years		1		1
Three years, six months		1		1
Four years, six months		1		1
Table No. 5, straight sentences, brought forward..	57	34	23	66
Grand Totals.....	789	810	754	795

Table No. 7.

SHOWING NATIVITY OF CONVICTS FOR TWO YEARS ENDING
SEPTEMBER 30, 1916.

NATIVITY	Present October 1, 1914	Received During Two Years	Dis- charged During Two Years	Present Sep- tember 30, 1916
Alabama	2	4	2	4
Alaska		1		1
Arizona		1	1	
Arkansas	2	1	2	1
California	24	19	16	27
Colorado	8	7	8	7
Connecticut		2		2
District of Columbia.....	1	2	1	2
Florida	1	2	1	2
Georgia	3	3	2	4
Illinois	41	38	41	36
Iowa	23	25	27	21
Idaho	4	3	3	4
Indiana	16	17	18	15
Kansas	14	20	16	18
Kentucky	20	18	17	21
Louisiana	4	5	4	5
Maryland	3	3	2	4
Maine	5	5	1	9
Massachusetts	15	19	17	17
Michigan	26	32	29	29
Minnesota	27	34	32	29
Missouri	37	38	32	38
Mississippi	5	4	2	7
Montana	2	6	5	3
Nebraska	4	12	6	11
New Hampshire	1	4	5	
New Jersey	4	4	5	3
New Mexico	1			1
New York	44	40	45	46
Nevada	1	4	2	3
North Carolina	2	4	3	3

Table No. 7—Continued.

SHOWING NATIVITY OF CONVICTS FOR TWO YEARS ENDING
SEPTEMBER 30, 1916.

NATIVITY	Present October 1, 1914	Received During Two Years	Dis- charged During Two Years	Present Sep- tember 30, 1916
Dakota.....	1	1	2	..
Idaho.....	4	5	6	3
.....	36	27	32	31
.....	9	16	14	11
Pennsylvania.....	36	29	34	31
Island.....	4	1	1	4
Dakota.....	7	1	7	1
.....	6	17	9	14
.....	8	14	10	12
.....	1	8	2	2
.....	2	.....	1	1
.....	9	8	8	9
.....	33	47	30	50
.....	.....	3	.....	3
.....	20	28	31	26
.....	1	1	.....	1
.....	1	.....	.....	1
.....	9	9	11	7
.....	2	2	3	1
.....	1	.....	.....	1
.....	1	1	.....	1
.....	1	1	2	.....
.....	28	36	24	40
.....	1	1	1	1
.....	1	1	.....	2
.....	1	.....	1	.....
.....	7	4	6	5
.....	23	26	26	23
.....	5	1	4	2
.....	6	14	14	6
.....	29	25	34	20
.....	5	10	8	7
.....	1	.....	1	.....
.....	1	2	2	1
.....	5	1	4	2
.....	5	14	7	12
.....	29	22	25	26
.....	.....	2	.....	2
.....	10	4	6	8
.....	.....	2	.....	2
.....	3	.....	.....	3
.....	1	1	1	1
.....	10	15	15	10
.....	2	2	4	.....
.....	3	4	2	5
.....	4	8	5	7
.....	5	9	8	6
.....	1	.....	.....	1
.....	2	.....	.....	2
.....	8	5	7	6
.....	.....	2	1	1
.....	1	2	.....	3
.....	2	.....	1	1
.....	1	.....	.....	1
.....	1	1	.....	1
.....	.....	2	.....	2
.....	.....	1	.....	1
.....	.....	1	.....	1
Totals.....	739	810	734	793

Table No. 8.
SHOWING OCCUPATION OF CONVICTS FOR TWO YEARS ENDING
SEPTEMBER 30, 1916.

OCCUPATION	Present October 1, 1914	Received During Two Years	Dis- charged During Two Years	Present Sep- tember 30, 1916
Accountant	2	7	4	5
Actor	2		1	1
Architect	1			1
Attorney—lawyer	5	2	4	3
Agent (real estate).....	1	3	3	1
Baker	5	4	5	4
Banker	2	7	6	3
Barber	12	16	12	16
Bartender (barkeeper)	2	1		3
Blacksmith	14	16	15	15
Boilermaker	3	3	4	2
Bookbinder	2		1	1
Bookkeeper	7	17	11	13
Bridgeworker		1		
Bricklayer		1	1	
Broker		1	1	
Butcher	1	8	4	5
Cabinet maker		3		3
Chauffeur		2	1	1
Carpenter	10	20	12	18
Cement finisher		1		1
Cigar maker		1		1
Clerk	6	9	10	5
Contractor	2	3	4	1
Cook	52	55	55	52
Cottonweaver		1		1
Cowboy	1	2	2	1
Crackerman	1	1	1	1
Dairyman		2		2
Demonstrator		1		1
Decorator	1		1	
Dry cleaner		1		1
Dentist	1		1	
Dishwasher	1			1
Detective		1		1
Electrician	10	7	9	8
Engineer	20	22	20	22
Engineer, civil		1		1
Engineer, gas		1		1
Farmer	48	57	40	65
Fireman	13	16	16	13
Fisherman		2	1	1
Film operator		1	1	
Florist	2	1	2	1
Furniture finisher		1	1	
Gas construction	1		1	
Engraver		1		1
Gardener	5	1	5	1
Glass blower	2	1	2	1
Harness maker		1	1	
Horseman	2	3	1	4
Hostler	1			1
Hotel keeper	1			5
Housewife	2	7	3	6
Housekeeper	3	3	2	4
Iron worker	1	4	5	
Jeweler	3	2	2	3
Janitor	1	3	2	2
Journalist	3	2	2	3
Laborer	225	221	209	227
Land grader		1		1
Laundryman	5	2	3	4
Liveryman	1			1
Locksmith	1	1		2

Table No. 8—Continued.

SHOWING OCCUPATION OF CONVICTS FOR TWO YEARS ENDING SEPTEMBER 30, 1916.

OCCUPATION	Present October 1, 1914	During Two Years	Dis- charged During Two Years	Present Sep- tember 30, 1916
Y	11	11	13	9
shoreman	1	1		1
erman	2		2	
ist	14	20	15	19
engraver		3	2	1
se maker	1			1
aker		1		1
unt	1	2	1	2
n (sawmill hand)	2	3	2	3
ght	1			1
	25	22	18	29
nan	1	1	2	
r	3		1	3
an	7	1	5	3
(female)	1			1
(male)	2	5	3	4
ey	1		1	
upation	2		1	1
maker	1		1	
	17	13	20	10
rapher		2		2
an (male)	2	1	3	
an (female)	1		1	
er	1	1	1	1
r	4	4	6	2
	5	8	8	5
	5	7	9	3
yman	1			1
r	3	6	3	6
id man (switchman)	9	10	12	7
	1		1	
	11	12	14	10
aker	1	1	2	
an	9	6	5	9
		1		1
	3		3	
weaver		7	1	6
itter	4	2	2	4
rapher		3	2	1
		1		1
l		1	1	
hand		1		1
an	1	1	1	1
ruiter	3		2	1
ason	1		1	
aker	15	11	15	11
or		1		1
	1	2		3
	15	13	13	15
, school		5	2	3
er	21	30	39	23
pber	1	1		2
me operator		1		1
		1		1
eeper	1		1	
foreman		1		1
maker	1			1
er		1		1
iller		1	1	
	31	24	28	27
chopper		1		1
maker	2	1		3
Totals	739	810	754	793

Table No. 9.

**SHOWING SEX AND COLOR OF CONVICTS FOR TWO YEARS
ENDING SEPTEMBER 30, 1916.**

SEX AND COLOR	Present October 1, 1914	Received During Two Years	Dis- charged During Two Years	Present Sep- tember 30, 1916
White male	646	749	683	712
White female	7	13	12	8
Negro male	58	36	43	49
Negro female	5	2	2	3
Indian male	10	4	6	8
Chinese male	1	1	.....	2
Japanese male	11	4	6	9
Kanaka male	1	.....	.....	1
Hindu male	2	.....	2	.....
Korea male .....	.....	1	.....	1
Totals.....	739	810	754	795

Table No. 10.

**SHOWING EDUCATION OF CONVICTS FOR TWO YEARS ENDING
SEPTEMBER 30, 1916.**

EDUCATION	Present October 1, 1914	Received During Two Years	Dis- charged During Two Years	Present Sep- tember 30, 1916
Academic	4	3	.....	7
Business college .....	.....	3	1	2
Collegiate	19	6	17	8
Common school	538	662	608	592
Grammar	2	1	.....	3
High school	33	71	44	60
No education	69	44	65	48
Not English .....	.....	2	.....	2
Private	29	3	8	24
Private and public	17	2	3	16
Self educated	7	2	2	7
Read only	6	1	.....	7
Read and write	14	.....	3	11
University	1	10	3	8
Totals.....	739	810	754	795

Table No. 11.

SHOWING AGE OF CONVICTS WHEN CONVICTED DURING THE
TWO YEARS ENDING SEPTEMBER 30, 1916.

AGES	Present October 1, 1914	Received During Two Years	Dis- charged During Two Years	Present Sep- tember 30, 1916
years	1			1
years	1	1		2
years	6	3	4	5
years	13	11	12	12
years	18	14	12	20
years	14	11	11	14
years	31	38	24	45
years	32	21	30	23
years	35	34	41	28
years	26	23	22	27
years	27	32	29	30
years	22	35	24	33
years	39	33	37	38
years	23	27	27	28
years	29	32	34	27
years	21	16	21	16
years	46	39	50	26
years	27	25	29	28
years	20	39	33	25
years	28	28	30	36
years	25	24	22	27
years	26	22	17	31
years	17	23	23	15
years	14	23	21	19
years	14	27	18	23
years	12	14	13	13
years	13	17	19	16
years	15	17	13	19
years	8	11	8	11
years	13	18	18	13
years	12	13	8	17
years	10	14	12	12
years	10	7	4	13
years	7	11	8	10
years	9	12	10	12
years	6	6	4	8
years	12	12	13	11
years	4	5	3	5
years	7	6	6	7
years	2	4	1	3
years	3	7	5	3
years	5	3	4	4
years	1	6	4	3
years	3	4	2	3
years	3	4	2	3
years	1	2		3
years	2	2	2	2
years	4	7	3	8
years	2	2	2	2
years	3			2
years	3	8	2	4
years	1	4	2	3
years	2	1		3
years	1	1	1	1
years	1	1	1	1
years	2		1	1
years				
years	1			2
years				
years	2		1	1
Totals	739	810	734	793

Table No. 12.

**SHOWING HABITS OF CONVICTS FOR TWO YEARS ENDING
SEPTEMBER 30, 1916.**

HABITS	Present October 1, 1914	Received During Two Years	Dis- charged During Two Years	Present Sep- tember 30, 1916
Intemperate	551	502	546	507
Moderate	5	66	7	64
Temperate	188	242	201	224
Totals.....	739	810	754	795

Table No. 13.

**SHOWING PLEAS OF CONVICTS FOR THE TWO YEARS ENDING
SEPTEMBER 30, 1916.**

PLEAS	Present October 1, 1914	Received During Two Years	Dis- charged During Two Years	Present Sep- tember 30, 1916
Gilty	406	537	488	455
Not guilty	333	273	266	340
Totals.....	739	810	754	795

Table No. 14.

**SHOWING CIVIL CONDITION FOR THE TWO YEARS ENDING
SEPTEMBER 30, 1916.**

CIVIL CONDITION	Present October 1, 1914	Received During Two Years	Dis- charged During Two Years	Present Sep- tember 30, 1916
Married	185	250	215	220
Single	467	455	443	479
Divorced	32	60	45	47
Widower	52	43	48	47
Widow	3	2	3	2
Totals.....	739	810	754	795

Table No. 15.

SHOWING DOMESTIC RELATIONS OF CONVICTS FOR TWO
YEARS ENDING SEPTEMBER 30, 1916.

DOMESTIC RELATIONS	Present October 1, 1914	Received During Two Years	Dis- charged During Two Years	Present Sep- tember 30, 1916
Other dead	162	157	140	179
Other dead	108	88	94	97
With dead	251	314	294	271
With living	175	220	192	203
Known	43	80	34	45
Total	739	810	754	796

Table No. 16.

SHOWING FORMER IMPRISONMENT IN WASHINGTON STATE
PENITENTIARY FOR TWO YEARS ENDING SEPT. 30, 1916.

WASHINGTON STATE PENITENTIARY	First Term	Second Term	Third Term	Fourth Term	Totals
Present October 1, 1914.....	652	72	13	2	739
Received during two years.....	708	86	14	2	810
Discharged during two years.....	601	58	7	3	754
Present September 30, 1916.....	609	106	20	1	796

Table No. 17.

EX-CONVICTS OF OTHER PRISONS.

OTHER PRISONS	First Term	Second Term	Third Term	Fourth Term	Fifth Term	Sixth Term	Totals
Present October 1, 1914.....	100	32	4	3	3	.....	148
Received during two years.....	91	17	3	1	.....	.....	112
Discharged during two years.....	107	26	5	6	.....	.....	144
Present September 30, 1916.....	84	24	2	3	3	.....	116

Table No. 18.

**SHOWING RELIGIOUS BELIEF OF CONVICTS IN PENITENTIARY
FROM OCTOBER 1, 1914, TO SEPTEMBER 30, 1916.**

RELIGION	Present October 1, 1914	Received During Two Years	Dis- charged During Two Years	Present Sep- tember 30, 1916
Catholic.....	235	218	219	234
Greek	3	3	4	2
Jewish	5	10	7	8
Heathen	10	4	4	10
No religion	44	21	29	35
Protestant	442	552	490	504
Spiritualism		1	1	
Lutheran		1		1
Totals.....	789	810	754	795

Table No. 19.

**SHOWING NUMBER OF PARDONS AND RELEASES FROM
OCTOBER 1, 1893, TO SEPTEMBER 30, 1916.**

YEAR ENDING	Average Attend- ance	Pardons Granted	Per Cent. of Pardons to Popu- lation	Total Releases All Sources	Per Cent. of Pardons to Total Releases
September 30, 1893.....	444.7	14	.08	177	.06
September 30, 1894.....	440.3	9	.02	200	.05
September 30, 1895.....	440.2	16	.08	159	.10
September 30, 1896.....	414.8	20	.04	157	.12
September 30, 1897.....	402.3	22	.05	167	.13
September 30, 1898.....	354.6	20	.06	210	.09
September 30, 1899.....	317.1	9	.08	153	.06
September 30, 1900.....	305.6	7	.02	133	.05
September 30, 1901.....	402.3	8	.019	136	.044
September 30, 1902.....	506.2	6	.01	204	.03
September 30, 1903.....	620.09	12	.019	273	.04
September 30, 1904.....	671.65	10	.015	268	.048
September 30, 1905.....	788.3	21	.023	300	.07
September 30, 1906.....	324.6	5	.006	313	.016
September 30, 1907.....	322.3	6	.0067	312	.019
September 30, 1908.....	970.9	8	.00324	306	.0218
September 30, 1909.....	924.55	27	.0292	313	.0849
September 30, 1910.....	733.23	14	.01909	553	.02518
September 30, 1911.....	600.76	21	.03495	501	.0419
September 30, 1912.....	771.07	41	.05817	320	.1231
September 30, 1913.....	333.03	27	.03241	496	.06556
September 30, 1914.....	757.29	30	.03961	515	.0632
September 30, 1915.....	364.45	6	.0099	345	.01738
September 30, 1916.....	331.73	4	.0043	409	.00977

Table No. 20.

SHOWING NUMBER OF CONVICTS EMPLOYED AT STATE ROAD
AND QUARRY CAMPS DURING TWO YEARS ENDING SEP-
TEMBER 30, 1916.

DATE	Maskell	Dixie	Honor Camp 2	Honor Camp 3	Honor Camp 5	TOTAL Received at Quarries and Road Camps
	Received from Peni- tentiary	Received from Peni- tentiary	Received from Peni- tentiary	Received from Peni- tentiary	Received from Peni- tentiary	
sent September 30, 1914.....	32	23	27	64		146
October, 1914	3	7				10
November, 1914						
December, 1914						
January, 1915						
February, 1915	2					2
March, 1915						
April, 1915						
May, 1915	10					10
June, 1915	10	28			73	111
July, 1915		1				1
August, 1915	8	7			24	39
September, 1915						
October, 1915	10	13				23
November, 1915		1				1
December, 1915	2				19	21
January, 1916						
February, 1916	19					19
March, 1916					30	30
April, 1916					21	21
May, 1916						
June, 1916	6					6
July, 1916						
August, 1916		16				16
September, 1916	3					3
Totals.....	105	96	27	64	167	459

Table No. 21.
SHOWING NUMBER OF PARDONS AND RELEASES FROM STATE ROAD AND QUARRY CAMPS DURING
TWO YEARS ENDING SEPTEMBER 30, 1916.

DATE	MESKILL			DIXIE			HONOR CAMP 2			HONOR CAMP 3			HONOR CAMP NO. 5					Total Discharged From All Sources.....
	Returned to Penitentiary...	Escaped.....	Discharged.....	Returned to Penitentiary...	Escaped.....	Discharged.....	Returned to Penitentiary...	Escaped.....	Discharged.....	Returned to Penitentiary...	Escaped.....	Discharged.....	Pardoned.....	Died.....	Returned to Penitentiary...	Escaped.....	Discharged.....	
October, 1914	3			1	2				7	3	2	4						22
November, 1914	2		5	2					8			3						20
December, 1914		2	2	25					8		1	3						40
January, 1915																		1
February, 1915	1											48						1
March, 1915	1		3															40
April, 1915																		4
May, 1915	2		3															
June, 1915	1		3															5
July, 1915	2	2	1	3														2
August, 1915	1	1	1	4														11
September, 1915	2	1	1	1														19
October, 1915	4	1	5	2		11							1					24
November, 1915	1		4															21
December, 1915			4			2												25
January, 1916	1		5	24		3												32
February, 1916																		42
March, 1916																		10
April, 1916																		12
May, 1916																		16
June, 1916																		10
July, 1916																		14
August, 1916																		6
September, 1916																		53
Totals.....	18	3	64	73	5	16	1	1	25	3	5	53	1	1	7	13	145	439

Commencing October 1, 1914,
Ending September 30, 1916.

[illegible]

COMPARATIVE STATEMENT of Convicts Received from Court, January to October, 1915, and January to October, 1916. Table to Show the Decrease of Commitments Since the Enactment of the Dry Law.

January, 1915.....	86	January, 1916.....	43
February, 1915.....	34	February, 1916.....	24
March, 1915.....	31	March, 1916.....	28
April, 1915.....	46	April, 1916.....	26
May, 1915.....	34	May, 1916.....	21
June, 1915.....	37	June, 1916.....	21
July, 1915.....	32	July, 1915.....	14
August, 1915.....	27	August, 1916.....	8
September, 1915.....	34	September, 1916.....	3
Totals.....	311	Totals.....	188

	BRAND					Total	Price	Items	Cost
	BR2	BR3	I	M	1914 2 and 3				
INVENTORY-- October 1, 1914	1,005	1,133				1,005	\$23 02	\$23,155 30	
						1,133	19 32	22,424 03	
Total.....	1,005	1,133				2,138			\$47,611 30
PURCHASES-- October 1, 1914, to September 30, 1916	124	125				124	\$18 76	\$2,336 24	
						125	17 26	2,157 50	
			1,973			1,973	24 00	47,302 00	
				748		748	34 86†	26,077 15	
					750	500	19 14	9,570 00	
						260	18 01	4,692 50	
Purchased totals.....	124	125	1,973	748	750	3,720			\$1,985 30
Total.....	1,129	1,258	1,973	748	750	5,918			\$139,506 75
JUTE USED-- October 1, 1914, to September 30, 1916	1,139					1,005	\$23 02		
						124	18 76		
		1,257				1,133	19 32	\$27,481 02	
						124	17 26	24,508 30	
			1,973			1,973	24 00	47,302 00	
				18		18	34 86†	627 43	
					750	500	19 14		
						260	18 01	14,072 50	
Total.....	1,139	1,257	1,973	18	750	5,187			114,129 30
INVENTORY-- September 30, 1916		1				1	\$17 26	\$17 26	
				730		730	34 86†	25,449 69	
Total.....		1		730		731			\$25,466 95

* Biennial report of September 30, 1914, shows inventory of \$47,608.30.

† Letter M enclosed by double triangle.

Exhibit No. 2.
STATEMENT OF JUTE FABRICS.

	PRODUCT									
	Grain Bags	Oat Bags	Hop Cloth	Burlap, 45-Inch	Hop Warp	Fleece Twine	Jute Waste	Matting, 18-Inch	Matting, 36-Inch	Burlap Warp
Inventory—October 1, 1914.....	276,830	91	287	1,016	38	20	56,234	728	235	
*Deduct	1,900		207						50	
Totals.....	274,930	91		1,016	38	20	56,234	728	185	
Manufactured—October 1, 1914, to September 30, 1916	2,414,335		27,873	2,754			56,220		645	847
Totals.....	2,689,265	91	27,873	3,770	38	20	114,454	728	830	847
Sold and delivered, two years.....	2,545,000		23,511	3,716			73,942	254	556	760
Shrinkage in cleaning raw jute.....							40,512			87
Used by state.....	15	91			38	20		161	8	
Totals.....	2,545,015	91	23,511	3,716	38	20	114,454	416	564	847
Inventory—September 30, 1916.....	144,270		4,361	634				313	266	

* Items remitted for in September, 1914, and not included in disbursements.

Exhibit No. 3.

STATEMENT OF JUTE FABRIC SALES, OCTOBER 1, 1914, TO
SEPTEMBER 30, 1916.

Total	Quantity	ARTICLE	Price	Amount
15,909	317,800	Grain bags	\$0.11	\$34,958 00
	909,550	Grain bags .....	.10	90,955 00
	1,227,250	Grain bags .....	.07	85,907 50
	400	Grain bags .....	.08	32 00
		Total.....		\$220,852 50
23,518	23,518	Hop cloth (yards).....	.15	\$3,528 75
		Total.....		\$3,528 75
1,716	212	45-inch burlap (yards).....	.15	\$31 80
	1,259	45-inch burlap (yards).....	.12	161 00
	340	45-inch burlap (yards).....	.11	39 10
	1,875	45-inch burlap (yards).....	.10	187 55
		Total.....		\$419 54
254	254	18-inch matting (yards).....	.30	\$76 40
		Total.....		\$76 40
550	100	36-inch matting (yards).....	.28	\$28 00
	85	36-inch matting (yards).....	.34	29 20
	371	36-inch matting (yards).....	.45	167 18
		Total.....		\$220 28
400	400	Hop warp (pounds).....	.12	\$50 00
		Total.....		\$50 00
300	300	Burlap warp (pounds).....	.12	\$45 00
		Total.....		\$45 00
1,942	73,942	Jute waste (pounds).....	.02	\$1,478 84
		Total.....		\$1,478 84

SUMMARY.

Grain bags	\$220,852 50
Hop cloth	3,528 75
Burlap	419 54
18-inch matting	76 40
36-inch matting	220 28
Hop warp	50 00
Burlap warp	45 00
Jute waste	1,478 84
Forfeiture	24 50
Total.....	\$226,008 81

Exhibit No. 4.

SHOWING FABRICS USED BY THE PENITENTIARY FOR BIENN-
NIUM ENDING SEPTEMBER 30, 1916.

ARTICLE	Price	Amount
91 only oat bags.....	\$0.08	\$7 28
13 only grain bags.....	.07	1 05
38 pounds hop warp.....	.15	5 70
20 pounds fleece twine.....	.15	3 00
161 yards matting, 18-inch.....	.30	48 30
5 yards matting, 36-inch.....	.45	2 25
Total.....		\$68 93

RECAPITULATION.

Remitted to State Treasurer September 30, 1914, to October 1, 1916.....	\$226,693 81
Amount of fabrics used by penitentiary.....	68 93
Total.....	\$226,762 74

Exhibit No. 5.

STATEMENT SHOWING INVENTORIES AND VALUATIONS AT
BEGINNING AND END OF PERIOD.

	VALUE OF JUTE FABRICS ON HAND					
	September 30, 1914			September 30, 1916		
Grain bags	276,850					
Deduct (See Exhibit 2) ..	1,900					
	274,950	\$0.08	\$21,996 00	144,270	\$0.11	\$15,869 70
Oat bags	91	.08	7 28			
Hop cloth (yards).....	207			4,361 1/2	.15	654 20
Deduct (See Exhibit 2) ..	207					
Burlap, 45-inch (yards).....	1,016	.10	101 60	53 1/2	.12 1/2	6 68
Hop warp (pounds).....	38	.15	5 70			
Fleece twine (pounds).....	20	.15	3 00			
Jute waste (pounds).....	58,234	.01 1/2	727 92			
Matting, 18-inch (yards).....	728	.30	218 40	312 1/2	.30	93 70
Matting, 36-inch (yards).....	235					
Deduct (See Exhibit 2) ..	50					
	185	.40	74 00	266	.45	119 70
Totals.....			\$23,183 90			\$16,743 98

Value September 30, 1914..... \$23,183 90
Value September 30, 1916..... 16,743 98

Decrease during period..... \$6,389 92

Exhibit No. 6.

MISCELLANEOUS JUTE MILL SUPPLIES, OCTOBER 1, 1914, TO
SEPTEMBER 30, 1916.

	Quantity	Price	Amount	Total
Parowax	4,014 lbs.	\$0.08	\$321 12	
Ghee	2,900 lbs.	.12½	362 50	
Flour	38,679 lbs.	4.05 bbl.	606 80	
Spindle oil	2,181.4 gals.	.15	327 21	
Tallow	989 lbs.	.07 1-7	70 64	
Jute oil	7,785 gals.	.14½	1,128 88	
Total.....				\$2,906 09
Miscellaneous supplies				12,270 44
Fuel			\$3,280 89	
Power			7,951 80	
Plant repairs			225 39	
Salaries			22,734 99	
Miscellaneous expense			638 29	
Total.....				34,811 36
Jute used	5,187 bales			114,129 80
Maintenance of officers.....				2,647 71
Total.....				\$165,765 40

Exhibit No. 7.

MANUFACTURING COSTS OF JUTE PRODUCTS EXCLUSIVE OF
PER CAPITA COST OF PRISONERS, OCTOBER 1, 1914, TO
SEPTEMBER 30, 1916.

Expenditures—		
Fuel	\$3,280 89	
Power	7,951 80	
Plant repairs	225 39	
Salaries	22,734 99	
Supplies	15,176 58	
Miscellaneous expense	638 29	
Total.....		\$49,987 80
Raw jute consumed (5,187 bales).....		114,129 80
Maintenance of officers.....		2,647 71
Total.....		\$165,765 40
Less revenue derived from baled waste.....		1,478 84
Net total expenditures.....		\$163,286 56

Manufactured product, 1,928,814 pounds; unit cost per pound, \$0.0856.

Exhibit No. 7A.

.0856 PER POUND.

	Quantity	Weight	Unit Weight	Unit Cost
Grain bags	2,414,335	1,895,520	.7805	\$0.0068
Hop cloth, yards.....	27,873	28,708	1.08	.088
Burlap, yards	2,754	1,967	.71	.0007
Matting, 36-inch, yards.....	645	1,782	2 762	.236
Burlap warp	847	847	1.	.0856

Exhibit No. 8.

**STATEMENT OF ACTUAL COST OF INSTITUTION TO STATE,
INCLUDING PER CAPITA COST, BASED ON JUTE FABRIC
SALES AND MAINTENANCE APPROPRIATION, BIENNIUM
SEPTEMBER 30, 1916.**

Value of jute fabrics sold and remitted for.....		\$228,608 81
Decrease in inventory (See Exhibit 5).....		6,389 92
Actual value of fabrics manufactured.....		\$220,308 89
Less manufacturing cost (See Exhibit 7).....		168,286 56
Amount remitted to state above cost exclusive of maintenance of men and plant depreciation		\$55,017 33
MAINTENANCE EXPENDITURE FOR BIENNIUM		
Period ending March 31, 1915, 6 months.....		\$90,265 59
Period ending September 30, 1916 (See Exhibit 9), 18 months.....		181,075 93
Total expenditure from maintenance appropriation.....		\$247,341 52
Less amount delivered to State Treasurer as above.....		55,017 33
Actual expenditure of institution, considering only maintenance appropria- tion and jute sales.....		\$192,324 19
Less expenditure represented by increased tangible capital.....	\$6,128 96	
Increase in live stock inventory—		
Cattle	\$6,880 00	
Hogs	600 00	
Chickens	227 00	
		7,687 00
Miscellaneous cash sales remitted.....	1,372 42	
		17,158 38
Actual cost of institution, considering maintenance appropriation and jute fabric sales, also including miscellaneous cash sales.....		\$175,165 81
Average number of inmates during period.....	742.35	
Daily per capita on above cost.....	\$0.3232	

Exhibit No. 9.

INMATES FUND, OCTOBER 1, 1914, TO SEPTEMBER 30, 1916.

Balance October 1, 1914.....	\$1,859 78	
Received during period	21,874 44	
Disbursed during period.....		\$20,266 85
Balance on hand September 30, 1916.....		3,467 37
Totals.....	\$23,734 22	\$23,734 22

STATE TRAINING SCHOOL.

State Board of Control, Olympia, Washington.

GENTLEMEN: I have the pleasure to submit to you the report of the State Training School for the biennium October 1, 1914, to September 30, 1916.

The general condition of the school is very satisfactory. The shops are working every day, and put out a creditable amount of work, considering that all the work is done by boys, who have to be trained from the bottom up, while most of them are ready for parole when they are able to work independently. This means that the school as an institution does not aim to train the boys in order to profit by their labors, but tries to live up to the higher principle of making the boys fit to take care of themselves, also giving them an opportunity to reap the benefits of their training. In this way the school tries to accomplish the ultimate purpose of this institution—to change the inmate from a liability to an asset for the state.

The health conditions are very good. Outside of a cough epidemic during the winter of 1915-1916, no serious sickness has occurred. The hospital wards are in excellent condition, while the surgery, especially after a recent purchase of an adequate sterilizing outfit, is above reproach.

The squad buildings are antiquated and unsanitary; therefore unfit to meet modern requirements. The interior of the buildings has been kalsomined and painted during the last few months, and presents a clean and well-kept appearance. Considerable improvement has been made in the lavatories by installing more sanitary closets and repairing the showerbaths and washbasins.

Several minor repairs and improvements were made, including the entire rebuilding of the boiler, and partly relaying the foundation of the shoprow.

The light and water lines are in bad shape, and will need considerable repairing in the near future.

A great improvement to the school is the new storeroom, built entirely by the boys. It is a one-story concrete structure, and is a credit to the institution. All the stores, which were before scattered over the place, are now under one roof, thus facilitating a proper distribution and enabling the administration at the same time to supervise the daily issue in an efficient way.

The dairy herd was considerably improved by the purchase of some high class Holstein Friesian cows and a thoroughbred Holstein bull. During the past three months, practically all the meat consumed was raised on the farm.

Where the butter bill formerly amounted to about one hundred dollars per month, at the present time the school, by an agreement with

the local creamery, not only makes its own butter, but also supplies the State School for Girls at Grand Mound.

The piggery is in fine shape, and the swine herd has proved to be a valuable asset.

The farm produced sufficient food for man and beast, and although the potato crop was not as large as was expected, there are enough potatoes to last until spring, especially as same are supplemented by a row of barrels, containing sauerkraut and pickled beans.

The present administration thought it wise to make a change in the school schedule. During the first year of this biennium the boys went to school one week, and worked in the shops the other week, the school hours being from 7:30 to 11:30 and 12:30 to 1:30, which means five hours school a day, or, as Saturday is a vacation day, 25 hours school every two weeks. At the present time the school hours run from 7:30 to 11:30 and 12:30 to 4:30, giving 40 hours school every two weeks. Every boy goes to school four hours daily, either in the morning or in the afternoon, while the other half of the day he works in the shops or on the farm. This arrangement keeps his mind focussed on work and school, and gives better results than the week-about system.

Efforts are being made to help the boys understand that the State Training School is not a penal institution in the regular sense of the word. Except for strictly administrative purposes, the administration does not indicate a boy by his number, but encourages the use of the first name. The old dungeons are torn out and the strap is abolished. In place of these antiquated means of correction, we have now a meditation room, where the offender is left to himself after an interview with the superintendent. For the smaller offenses the boys are deprived of the moving picture show or their play hours. The boys respond readily to this more humane treatment.

The BOYS' CONGRESS, or a limited self-government plan, is in operation, and although the boys have to be educated to this point, we do not doubt but that in the end this will prove the one important item in teaching them self-control, and will aid them in assuming responsibility.

The honor system is strictly maintained, and as the honor squad consists of boys who have proved themselves trustworthy, the administration has taken advantage of this by placing the smaller boys from 8 to 10 years under the care of these honor boys, thus eliminating the danger of possible contamination from the few incorrigibles.

We have asked for a special appropriation of \$100,000 for the building of two cottages containing room for 48 boys each. These cottages are absolutely necessary in order to keep the younger, and also the more advanced boys, separated from the really incorrigible, and we believe that after a proper segregation of the boys the good results of the school will be more than ever guaranteed. For the proper equipment and furnishings for these cottages we have asked for \$10,000, an amount which we think reasonable.

We have also asked for an appropriation of \$20,000 for a gymnasium, which is one of the urgent needs of the school. The boys, even numbering from 80 to 100 in each squad, have to be crowded together during bad weather in playrooms which are entirely unfit for a purpose, and we are satisfied, after an examination of the conditions of these playrooms, none will deny not only the desirability, but the absolute necessity of an up-to-date gymnasium.

For the clearing of fifty acres of stump land we have asked for \$10,000, and as this land is the best which the school has, we believe the expense amply justified it.

On account of the land being very low and wet, however, we have asked for an appropriation of \$2,000 for draining it efficiently.

ESTIMATED VALUE OF THE WORK OF THE DEPARTMENTS FOR THE
BIENNIUM ENDING SEPT. 30, 1916.

Machine shop	\$3,813 92
Carpenter shop	6,887 12
Shoe shop	3,761 94
Tailor shop	4,337 27
Farm	11,171 64
Laundry	3,748 43
Ice plant	589 50
Total	\$30,001 82

COMMITMENT BY COUNTIES—1914-1916.

Anotin	1
Chelan	1
Chehalis	2
Clallam	1
Clarke	3
Columbia	2
Cowlitz	1
Ferry	2
Garfield	1
Grant	2
Grays Harbor	6
Jefferson	2
King	40
Kitsap	8
Kittitas	2
Lewis	17
Lincoln	3
Mason	2
Pierce	45
Skagit	9
Snohomish	21
Spokane	40
Stevens	5
Thurston	3
Wahkiakum	1
Walla Walla	9
Whatcom	22
Whitman	5
Yakima	9
Total	265

	<i>Biennium</i>	<i>During Biennium</i>
Boys at the first of.....	188	....
New boys received		265
Boys returned from parole		68
Boys returned from escape.....		44
Boys paroled		297
Boys discharged		44
Boys escaped		89
Boys transferred		8
Boys died		1
Boys at the end of.....	125

Respectfully submitted,

GEO. A. SHEAFE,

Superintendent.

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REPORT OF PAROLE OFFICER OF STATE TRAINING SCHOOL.

State Board of Control, Olympia, Washington.

GENTLEMEN: When I took up the work of Parole Officer for the State Training School for Boys on September 1st, 1915, I was instructed by you to pay particular attention to the parole work. I have endeavored to the best of my ability to do so, and submit herewith my report of what I have been able to accomplish since that time up to September 30, 1916.

By reference to the superintendent's report you will observe that 297 boys were paroled during the biennium, and that 68 were returned from parole during the same length of time. This would appear to be rather a high percentage, but it must be borne in mind that a part of those returned from parole during the biennium had been paroled prior to October 1st, 1914, and also, that a part of those who returned did so voluntarily.

When I took charge of the work as Parole Officer I immediately made a list of the boys on parole and arranged them according to counties. No such system had been used prior to that time and I find it a great convenience in checking up the boys who are out.

Since September 1st, 1915, 172 boys have been paroled; 107 of these went home to parents or relatives, and 51 went out to work on farms and in other lines of employment which we have been able to secure for them. In addition to this, we were able to place 14 orphan and dependent boys in new homes, under surroundings which give them an opportunity to develop into useful citizens. Several of these boys had been in the school for periods ranging from two to four years, and their delight at being released was worth all the effort required to bring it about. You will note that, of the boys paroled since September

st, 1915, approximately 38 per cent. went to homes and jobs which were secured for them, either directly or indirectly, through the efforts of this department. I am pleased to report that at the present time we have a waiting list of applicants—in other words, more calls for boys to work at useful occupations and to come to homes where they will be welcomed and treated as members of the family, than we are able to fill.

In my work as parole officer, I have been impressed particularly with one thing, and that is, that the State has not made proper provision for visiting and checking up the boys who are out on parole. Too much of the time of the parole officer is taken up as a traveling guard, going for boys who have been committed and for those who have escaped and been captured. I have found it impossible to mark out a parole trip for myself with the assurance that I can follow out my plans, for the reason that frequently I have no more than started my investigation than I am called to go to a distant part of the State and bring to the school a boy who has been committed.

According to our records, we have now on parole, within the State of Washington, 299 boys of all ages, characters and dispositions, and the list is constantly increasing. In order to pay proper attention to these boys, so that they may know that the school is yet "keeping tab" upon their conduct and still has an interest in them, the parole officer should be relieved of other work. Besides, visiting paroles is but one feature of the work. Every application for a boy to work, or to enter a home, should be thoroughly investigated in advance of the parole, but under the present system it is impossible to find time for this work. In my judgment, it is most important that every boy sent from the school be made to understand that his conduct is being watched, and also that the school authorities are his friends, interested in his welfare and willing to help him in any possible way.

For the above reasons I recommend that the parole officer be permitted to attend to his work unhindered and unhampered by calls to act as a traveling guard. Surely society, which places these boys in the Training School, for the protection of itself and the advantage of the boy, has not done its full duty until and unless it has provided a workable parole system which will be both a benefit and an encouragement to the boy after he has gone out into the world to take his place beside the more fortunate lads who have friends and relatives to assist them.

Respectfully submitted,

O. J. SAVILLE,

Parole Officer.

STATE SCHOOL FOR GIRLS.

To the Honorable State Board of Control:

GENTLEMEN: It is with pleasure I submit to you the first biennial report of the State School for Girls, for the period beginning December 22, 1914, and ending September 30, 1916.

I received my appointment November 1st, and assumed the duties of superintendent December 14th, when in company with my officers and eight girls from the old school we took possession of our two new buildings. The balance of the girls, making 52 in all, came December 22nd.

Realizing we must have just the harmony among the officials we desire among the girls, this has always been maintained. Believing every girl would rather be a nice girl than not a nice girl, if properly directed, it has been the aim to keep them so occupied with either work or play—and at the same time so interested and happy—there would be no time for anything else.

Our first problem was the cleaning of the buildings and clearing away the debris from around the outside. There was much sewing to be done—all the girls needed complete outfitting. We had no table or bed linens made up—the first week we slept in unhemmed sheets and on our tables used cloths in the same unfinished state.

In the long evenings around the living room fires, by reading, talking and singing—while the girls crocheted, embroidered, etc., we made them *know* we refused to think of, or believe in the past and entertained only the greatest hopes for their futures, knowing they could make them what they would; that they were not here for punishment, but because they needed our help—and this was to be thought of as their home until they were twenty-one—even though they might be out on parole.

The girls reflected our interest and enthusiasm and as a result the amount of work turned off astonished us all. Following are some of the improvements:

Pruned and sprayed two old orchards from which we have received barrels of fruit.

Took down and cleared away a number of old sheds, buildings and fences.

Planted 250 Holland holly-bearing hollies along main road which we expect in a few years will be income producing.

Planted several hundred fruit and nut trees.

Planted asparagus, rhubarb and strawberry beds.

Picked up many wagon loads of sticks on the newly cleared land.

Enough potatoes were raised for last winter.

Over 25 tons have been put in the root house for this winter.

(CH 17)

All forage crops used have been raised by the girls.

These and other farm products have totaled \$3,990.72.

Built five temporary bridges that are washed out every winter by the high waters.

Built concrete curb at spring from which we receive all our water supply.

Constructed several miles of pasture fencing.

Constructed several miles of roadways.

Planted and cultivated from 12 to 15 acres of garden.

Made over interior of old barn to be used temporarily for cows, horses, calves, pigs, pigeons, rabbits and for storing root crop, for stock, hay, feed, etc.

Built new administration building.

Built temporary rough plank walk connecting administration building with other cottages.

Girls built waterfall in court of administration building, using clinkers dipped in liquid concrete.

Have raised all our turkeys for this year.

Have three barrels of cucumber pickles and two barrels of pickled beans, raised and made by the girls.

147 quarts of fancy pickles raised and put up by the girls.

879 quarts of fruit picked and put up by the girls.

240 quarts of vegetables canned by the girls.

80 pounds home dried corn.

40 pounds home dried prunes.

6 wagon loads of squashes and pumpkins.

From our gardens we have had all kinds of fresh vegetables in abundance, as shown by "Farm Report," which follows.

We have occupied our new administration building for two months. Twenty-four honor girls came with us and I am proud to say we have never had a door locked in this building. It is the plan to receive entering girls in this building for a short time that we may come in closer touch with them and that they may receive inspiration from the honor girls.

All this time our enrollment has steadily increased until now our number is 98, even after having paroled 39, whereas our legal enrollment, including the three buildings should be 84.

In the table showing movement of population, ten out of the 39 are shown as having been returned from parole, who were paroled from this school. Only five of our number violated their parole, and others having returned for other reasons or for short time only. I feel we are largely to blame for these failures. In some cases we were influenced to try them on parole because of new ones waiting to enter, and for whom we had no room. In other cases we were over-persuaded to let them go before we felt they had found themselves anew.

The girls by their co-operation have helped us create an atmosphere in which it is easier to do right than wrong—and there has been

a joy manifested in all the work which has robbed it of any seeming drudgery.

Occasionally some run away—they do from good homes. Almost invariably they are grateful to be back. We have never lost any.

Two of our girls have been married from the school to fine young men they knew before coming here. Many of the girls have desirable suitors, which is not surprising, as they are most attractive. The same force which undirected, carried them too far one way, when controlled and rightly directed, makes of them unusually capable and attractive young women.

One who had been on parole for a year was married here a week ago, having asked to come "Home" to be married. At these times we give them the daintiest, prettiest wedding possible—which is deeply appreciated by all the girls.

We have been greatly handicapped because of no schoolroom accommodations. However, we are hoping for a new school building next year, and in the meantime expect to have a portable one which we are looking for daily.

Last year we used the domestic science rooms on alternate days, but owing to our increased numbers this is no longer possible. We are also starting high school work this year as we have 26 girls ready for it. We mean to make this a two-year accredited course.

Our beautiful piano presented by the Mothers' Congress and Parent Teachers Association has been much appreciated by the girls in Parker Moore Cottage. One was brought from the old school for Granger Hall. Several of the girls take private lessons for which their people are glad to pay.

Each cottage also has a Victor talking machine, the gift of Mr. and Mrs. E. C. Blanchard of the Northern Pacific.

A dozen beautiful little songsters have also been a gift from Mr. Blanchard.

Mrs. R. S. Fringer of Seattle started the girls with the ukulele. Since then several of the girls have their own. Two have guitars.

We hope before many months to have a piano for the administration building.

The Seattle Park Board, through their superintendent, Mr. J. V. Thompson, presented the school with over a carload of trees and shrubs for border plantations. Their chief engineer, Mr. H. L. McGillis, laid out our main driveways, all of which we all appreciate.

I wish to thank the members of our State Board of Control for their hearty co-operation and support at all times, and for their expressed appreciation which has been a continual incentive to us all.

Most respectfully submitted,

MARY CAMPBELL,
Superintendent.

MOVEMENT OF POPULATION BY COUNTIES.

COUNTIES	Received by Transfer from Training School...	Received by Commitment.	Received by Return from Parole.....	Received by Return from Escape.....	Discharged.....	Paroled.....	Transferred.....	Died.....	Escaped.....	Present in Institution September 30, 1916.....
Benton	1					1				
Chelan		1								1
Clark	1		1			1				1
Ferry	2	2		1	1	1			1	8
Grays Harbor	2	7				2		1		6
King	7	21	1	2	2	3			4	24
Kitsap	1					1				
Kittitas	1									1
Lewis	1	4		2	1	1			2	3
Lincoln	1	2				1				2
Pacific	1						1			
Pierce	6	12	2	1	1	4			1	15
Skagit	6	1	1	1		5			1	3
Snohomish	5	5	4	2		7			2	7
Spokane	1	9	1			1				10
Thurston	1	3	1			1				4
Walla Walla	2	1		1	1				1	2
Whatecom	3	4	3	2		4	2		2	8
Whitman	2	1	1			2				1
Yakima	2	6	1			2				7
Totals.....	52	80	16	14	6	39	4	1	14	98

Movement of Population of Paroled Girls.

Girls on parole at date of transfer from Training School, Dec. 22, 1914.	98
Paroled during present biennium.....	30
Returned from parole.....	16
Discharged from parole, of age.....	50
On parole September 30, 1916.....	66
Total.....	132
	132

Ages of Girls Present in Institution September 30, 1916.

Eleven	1
Twelve	1
Thirteen	2
Fourteen	5
Fifteen	12
Sixteen	26
Seventeen	20
Eighteen	21
Nineteen	10
Total.	98

Average age of girls in institution, 16 plus.

Table Showing Causes of Commitment.

Incorrigibility	4
Delinquency	78
Dependency	16
Total	98

Table Showing Social Condition of Girls Present in Institution.

Lost parent by death	42
Lost parent by separation or divorce	33
Having normal homes	23
Total	98

Statement of Inmates' Fund.

Money in fund at date of transfer from State Training School, December 22, 1914	\$20 12	
Received during biennium	903 37	
Disbursed during biennium		\$871 27
Balance in fund September 30, 1916		54 22
Total	\$925 49	\$925 49

Statement of Parole Fund.

Established February 1, 1916, with deposit of	\$3 00	
Received during balance of biennium	149 39	
Disbursed		
Balance in fund September 30, 1916		\$152 39
Total	\$152 39	\$152 39

Statement of Miscellaneous Fund.

1915		RECEIPTS	
July 1	Standard Oil Co., check for 25 lbs. Zero grease returned...		\$2 13
July 30	Collections on girls' dental account		4 00
Aug. 31	Collections on girls' dental account		40 31
Sept. 30	Collections on girls' dental account		31 19
Nov. 22	County of Ferry, refund account mileage used in transportation of witness		59 11
Nov. 26	Eva Wilmarth, refund transportation Grand Mound to Seattle		2 70
Nov. 30	Bertha Miller, refund transportation Grand Mound to Bellingham		5 70
1916			
Jan. 1	Harriet Wright, refund mileage pulled Tacoma to Grand Mound, December 24, 1915		1 62
Jan. 1	Laura MacMillan, refund of salary, Dec. 1 to Dec. 10, 1915		17 42
Jan. 31	Edith Clarke, refund transportation Grand Mound to North Yakima		7 55
Jan. 31	Alma Schott, refund transportation Grand Mound to Seattle		2 85
Mch. 31	Mrs. F. Playman, refund mileage pulled round trip Grand Mound to Auburn		4 53
Apr. 30	Collections on girls' dental account		35 50
May 31	Collections on girls' dental account		20 25
June 30	Collections on girls' dental account		8 00
July 31	Collections on girls' dental account		3 50
Sept. 30	N. P. Ry., refund on freight paid transportation of two cows, Olympia to Grand Mound		2 45
Total			\$248 83

Statement of Miscellaneous Fund—Continued.

DISBURSEMENTS

Aug. 10	Remitted to State Treasurer.....	\$6 15
Sept. 10	Remitted to State Treasurer.....	40 31
Oct. 10	Remitted to State Treasurer.....	81 19
Dec. 10	Remitted to State Treasurer.....	67 51
Feb. 10	Remitted to State Treasurer.....	29 44
Apr. 10	Remitted to State Treasurer.....	4 53
May 10	Remitted to State Treasurer.....	35 50
June 10	Remitted to State Treasurer.....	20 25
July 10	Remitted to State Treasurer.....	8 00
Aug. 10	Remitted to State Treasurer.....	3 50
Sept. 30	Remitted to State Treasurer.....	2 45
Total.....		\$248 83

FARM REPORT.

For Period Commencing March 1, 1915, and Ending September 30, 1916.

COMMODITY	Unit	Quantity	Value
Beans, string	Lbs.....	2,777	\$79 82
Beets	Lbs.....	2,692	61 95
Beet greens	Crates ..	67	20 05
Brussels sprouts	Lbs.....	42	3 36
Beans, white	Lbs.....	111	6 99
Cucumbers, table	Doz.....	221	95 17
Cucumber pickles	Crates..	18	50 41
Corn, green	Doz. ears.	1,021	158 70
Cauliflower	Lbs.....	70	1 40
Cabbage	Lbs.....	7,386	99 64
Carrots	Lbs.....	3,000	29 83
Cohlrabi	Lbs.....	578	10 78
Lettuce	Doz. hds..	119	40 55
Onions, green	Doz. bun..	189	45 13
Potatoes	Lbs.....	28,400	364 80
Peas, green	Lbs.....	2,109	85 41
Pumpkin	Lbs.....	51	1 02
Parsnips	Lbs.....	1,012	10 12
Radishes	Doz. bun..	157	38 32
Rhubarb	Lbs.....	1	30
Squabaga	Lbs.....	1,681	16 31
Squash	Lbs.....	502	11 84
Swiss chard	Crates....	469	32 22
Tomatoes, ripe	Lbs.....	188	16 65
Tomatoes, green	Lbs.....	1,400	25 00
Turnips	Lbs.....	300	4 65
Total garden products.....			\$1,306 43
Strawberries	Crates....	73	\$77 22
Runes	Crates....	79	32 29
Pears	Crates....	51	57 42
Yellow plums	Crates....	6	4 82
Berries	Crates....	28	28 00
Total value fruit.....			\$200 75
Barley	Tons.....	3.6	\$132 19
Oats	Bushels..	511	201 71
Wheat	Tons.....	7.7	316 05
Clutch	Lbs.....	570	45 80
Straw hay	Tons.....	62	857 00
Alfalfa and grass hay.....	Tons.....	12	216 00
Total value forage crops.....			\$1,778 53

Farm Report—Continued.

COMMODITY	Unit	Quantity	Value
Milk*	Lbs.....	28,853½	\$625 82
Eggs†	Doz.....	334½	95 29
Chicken meat	Lbs.....	196½	38 15
Squab	Lbs.....	1	3 50
Rabbit meat	Lbs.....	251½	42 23
Total value dairy and poultry departments.....			\$704 99

SUMMARY.

Garden products	\$1,306 43
Fruit	200 75
Forage and grain.....	1,778 55
Dairy and poultry products.....	704 99
Total value farm products.....	\$3,990 72

*February, 1916.

†March, 1916.

WASHINGTON STATE REFORMATORY

Fifth Biennial Report

OF THE

BOARD OF MANAGERS

**For the Period Ending September
30th, 1916**

**Monroe, Washington
1916**

BOARD OF MANAGERS.

HENRY R. KING, *President*.....Seattle
F. F. SWALE, *Vice-President*.....Everett
T. E. SKAGGS, *Secretary*.....Olympia
FRANK C. MORSE.....Olympia
W. H. COCHREAN.....Olympia

STATUTORY OFFICERS.

DONALD B. OLSON.....*Superintendent*
H. K. STOCKWELL, M. D......*Physician*
WILFRED WITHINGTON.....*Chaplain*

MONROE, WASHINGTON, September 30, 1916.

To His Excellency the Governor and the Senate and House of Representatives of the State of Washington.

GENTLEMEN: The Fifth Biennial Report of the Board of Managers of the Washington State Reformatory for the period beginning October 1, 1914, and ending September 30, 1916, is herewith respectfully submitted.

HENRY R. KING, *President.*

F. F. SWALE, *Vice-President.*

T. E. SKAGGS, *Secretary.*

FRANK C. MORSE.

W. H. COCHRAN.

WASHINGTON STATE REFORMATORY.

SEATTLE, September 30, 1916.

Excellency, Governor Ernest Lister, Olympia, Washington.

SIR: The Board of Managers of the Washington State Reformatory herewith present their report of the conduct of the affairs of the institution for the biennium ending September 30, 1916.

The regular monthly meetings of the board have been supplemented by many visits to the institution made by individual members.

We have kept constantly in mind your request that we exercise the most careful supervision of the operating and upkeep cost of the institution, to the end that every dollar possible should be saved the taxpayers of the state. This has been accomplished largely by stimulating the imagination, arousing the ambition, and awakening in both officers and inmates a spirit of co-operation and a real desire to render the state a valuable service. The reaction has advanced the real work of the institution, the reforming of the lives of the men sent to us.

One of the most urgent needs of the institution is a pure and adequate water supply. There should be no further delay in this matter if the health of the population is to be conserved and the state's property given the necessary fire protection.

A searching investigation for possible sources of supply has been made and under the direction of Mr. R. H. Thomson, C. E., of Seattle, on his report containing full engineering data showing the entire feasibility of the Lake Fontal project, we have based our recommendation for an appropriation of \$80,000, to insure for all time, an ample supply of water for this institution.

The physical side of the institution is in a most flattering condition. The operations on the farm and in clearing the land and preparing it for crops, while interfered with somewhat by the long drawn out rainy weather of the past season, has gone forward steadily, showing good results. We are encouraging the inmates in every possible way to pursue farming as a life work. No finer thing could be done for this institution than to arrange for the State Agricultural College to establish here an experimental farm, so that these boys and young men could have the training that would enable them to go out to a life of greatest usefulness, qualified to aid in the developing of the state's great industry. We earnestly recommend this suggestion for your most thoughtful consideration for we firmly believe that the greater the emphasis laid upon the educational and vocational work now being carried on and planned for the future by this institution the more profitable and satisfactory will be the results obtained.

It affords us the keenest delight to be able to report that the biennium has shown a marked increase of interest on the part of all connected with the work. Each department has made an honest effort

to do constructive work in the rehabilitation of the men, and have worked consistently and harmoniously to carry out the wishes of this board.

The inmates have responded nobly and you have only to look into their eager, expectant faces to realize that a great change has been wrought here, ambition has been aroused, hopes quickened, and an assured faith in the purposes of the state to aid them in every way that is for their best good has been created.

The superintendent and his force of faithful coworkers deserve unstinted praise for this notable forward movement in the real work of reformation.

We trust that you will give the superintendent's and the departmental reports careful scrutiny. You will find them interesting and instructive in the detail work of this institution, which deserves a large place in the confidence and sustaining influence of the taxpayers of the State of Washington.

We have the honor to be,

Yours very respectfully,

H. R. KING,

President Board of Managers.

SUPERINTENDENT'S REPORT.

To the Honorable Board of Managers Washington State Reformatory.

GENTLEMEN: I have the honor to present herewith my report of the Washington State Reformatory for the two years ending September 30, 1916. This report includes a complete statement of the activities of the institution and an outline of the proposed work for the ensuing biennium; together with the estimated cost of the same. Herewith, also, is transmitted the necessary statistical information and reports of the several departments of the institution.

The reformatory had a remainder in its funds at the close of the last biennium amounting to \$91,738.82; it received at the hands of the legislature of 1915, the sum of \$290,500.00, making a total of \$382,238.82. From the previous appropriation there was expended the sum of \$77,907.10, permitting the reversion to the state of \$13,181.72 and there has been disbursed from the current available funds the sum of \$192,525.10, with a present remainder of \$97,974.90. The total expenditures for the period have amounted to \$270,432.20.

BUILDINGS.

Main Building.—As anticipated in the last annual report, the main building, comprising the rotunda, or central office of the institution, and the north half of the cell block, was ready for occupancy on the 5th of

December, 1914. This building has provided sanitary sleeping and living quarters for the inmates and has aided materially in caring for them properly. With the close of the fiscal biennium, there was still some work of a finishing nature to be done, but now this has been completed. The entire building has been painted and equipped for use. The rotunda contains the central gate which operates electrically the doors leading into the institution from the administration building to the cell block; an interview room where inmates may be interviewed by institution officials, officers' barber shop, and remote control switchboard, which is operated from the same desk as are the doors; and, also, inmates may visit with friends or relatives. The cell block contains 320 cells, each with individual lavatory and toilet equipment, heated and ventilated by the hot air system. The ventilation is excellent in that one set of fans force the fresh air into the building and a second set draws the bad air therefrom and discharges it into the open. Each cell is furnished with a cot, locker, table and stool; the lockers and tables having been made in the institution by inmate labor. The material is on hand for the stools.

Shop Building.—During the previous biennium, we completed a shop building but were without machinery; the last legislature appropriated \$4,000.00 for the purchase and installation of wood and iron working machinery and with what is already in place and that which is ordered, the entire equipment consists of:

Installed—One emery grinder, with motor; one 32-inch band saw, with motor; one 8-inch Sidney jointer, with motor; one No. 2 Sidney saw table, with motor; one 24x8 Sidney S. surfacer, with motor; one 16x16 power grind stone, with motor.

Ordered—One 23-inch sliding head drill press; one 16-inch swing, M lathe, with motor; one Robertson No. 3 high speed hack saw; one Crescent S. S. shaper, with motor.

Wall.—Under the appropriation of 1913, the foundation of the permanent wall of concrete was laid on two sides and the legislature of 1915 was asked to provide funds for its completion, but this was deferred. However, the present wall was straightened and rebuilt just outside the line of the permanent wall. This change permitted the use of a smaller force of guards and materially improved the appearance of the plant. At the same time these improvements were made, the old wall was removed from the front of the institution. This permits free and easy access to the administration building by the public.

Storehouse.—The appropriation for this purpose has been nearly expended in the construction of a brick and reinforced concrete storehouse, similar in design and construction to the building already in use as a shop building; this will permit the use of the latter building entirely for shop purposes. Up to this time the upper floor has been occupied by the stores department.

IMPROVEMENTS.

Farm Equipment and Stock.—The herd of milch cows is slowly increasing and the production of milk is sufficient to supply the institution. The herd has been subjected to tuberculin tests and with few exceptions have been found free from taint; those that reacted to the test, three in number, were promptly removed from the herd and killed. Milk provides one of the healthiest and at the same time most wholesome articles of diet that can be provided for the men; with a large herd of milch cows, not only can an ample supply of milk be provided, but we also expect to manufacture butter and cheese, both of which will aid materially in decreasing the per capita cost of maintenance.

The swine have increased in numbers and value considerably, at the same time furnishing the institution with an ample supply of fresh pork. We soon hope to arrive at the stage where we can furnish not only our fresh pork, but ham, bacon, and salt pork as well. Before the end of the fiscal period we expect to have permanent, sanitary piggeries constructed which will provide additional facilities to take care of the natural increase.

The poultry has, perhaps, had the greatest development during the same period; we have increased the poultry by the purchase of good stock from the Western Experimental Station of the State College, the principal breed being White Leghorn. Modern sanitary laying houses and colony houses have been constructed and the poultry division put into a high state of efficiency.

The plant division has been extended as rapidly as new land was available. Crops of berries, prunes, apples and other fruits; tomatoes, corn, beans, peas, and the principal root vegetables have been raised this season and provide a diet for the men really better than meats.

In all these divisions, progress has been made, but all may be advanced further in their efficiency, and for this purpose additional funds are requested as hereinafter listed in the appropriations.

Installation of Oil Burning System.—The appropriation for the installation of an oil burning system in the heating and power plant has been deferred. At the present time, the cost of slab wood is less than oil and we believe this condition will prevail for some years to come, and, all things being equal, we believe Washington industries should have the preference. It was considered inexpedient to make such a change.

General Repairs and Improvements.—With the funds available under this title, we have painted all the buildings, repaired the roofs, and made other necessary improvements. The largest single improvement was that made in the inmates' kitchen, where a tile floor was laid, a new range installed, and a general overhauling and rearrangement effected, increasing not only the convenience of the kitchen, but making for a more sanitary place for the preparation of the inmate food.

Clearing Land.—About one-half of the appropriation for this purpose has been expended for clearing the institution property of timber, stumpage, roots, etc. When the institution was established, the entire state property, except what is now the state orchard, was uncleared, and its clearing was deemed so important that a special appropriation was requested of the last legislature for this purpose. With this, the work has progressed more rapidly than before, there being about ninety acres cleared, thirty of which have been put into cultivation and the remainder being ready for the final working to put it into a tillable state.

Waterworks.—Three different explorations have been made with a view to selecting a suitable site for a water source, the entire expense of which will not cost one-tenth of the appropriation granted by the legislature of 1915. At the time the previous report was made, we had completed the boring of three shafts in an effort to establish a local system wholly within the institution bounds, but, failing in that, we requested and secured an appropriation specially for a water system. Upon careful investigation, it was found that the most desirable water source and shed was to be obtained at Lake Fontal and engineers have been employed to prepare plans and specifications, and to estimate the cost of the work which is set forth in the section of this report covering the needs of the institution.

Sewers.—The institution required additional drainage and trunk lines to the Skykomish river, accordingly this appropriation was requested two years ago and obtained. With this fund we have constructed drainage lines from the yard of the main enclosure, the laundry and other buildings. We have also dug a ditch connecting the farm drainage system with one of the laterals of the Grand Marsh drainage district project of Snohomish county; this ditch is over a mile in length, five feet deep, and was dug entirely by inmate labor under the supervision of an officer.

Sidewalks.—A cement sidewalk has been laid connecting the domestic building with the power house and shops; walks have been laid between the shops now built and also in rear of them and the power house. This is an improvement that was greatly needed and one which provides dry access to and between the buildings named.

Duplicate Lighting System.—The mechanical alternate equipment to be used in case of a local shutdown has been found unnecessary and this appropriation remains intact. However, it should not be confounded with that which is requested for the purpose of extending the switchboard and segregating the light and power lines in the tunnel which carry current to the buildings not adjacent to the power house.

INDUSTRIES.

Perhaps of first importance is the manufacture by the institution of its own electric energy; this is done in the local power plant, connected with the various departments and buildings by a tunnel. Both

light for the entire institution and power with which to operate the automatic doors, ventilating fans, shop machinery, kitchen equipment, farm machinery, etc., is furnished. After the steam has passed through the engines, it passes into lines which take it through the various buildings where it is utilized as heat and also in cooking.

In connection with the power house should be mentioned our problem of fuel. It appears that wood is the cheapest fuel, though its delivery to the firebox constitutes a problem that involves considerable thought and some anxiety in the winter months. All of the wood burned is purchased from nearby mills. Owing to the distance between the institution and the railroad, its transportation to the power house involves the use continually of a truck, making several trips each day; the paving of the county road from the institution to Monroe has facilitated this somewhat, but this item is one of continual expense.

Training and experience in many varied industries is to be had in the institution. Among the vocations are auto driving and repairing, baking, barbering, bricklaying, butchering, carpentry, and wood working, clerical, construction of all kinds, decorating, electrical, stationary engineering, farming in all its branches, glazing, harness making, hospital work, general kitchen work, laundering, land clearing, mattress making, music (band and orchestra), painting, photography, plumbing, printing, saw filing, shoe repairing, steam fitting, stenography, tailoring, teaching, typewriting, and many branches of common labor.

EDUCATIONAL.

Under the supervision of a civilian director, inmates who have had the advantage of higher education conduct school for those men who come to the institution, in many cases without even the essential rudiments of education, and though most of the men are here little longer than a year, those who require it can leave the institution better fitted for a life's struggle than when they were admitted. Perhaps the greatest cause of delinquency and wrongdoing lies in the absence of education, and while in most cases committed to the reformatory the men are at an age when school does not appeal to them, nevertheless great good can be accomplished. It is readily to be observed that the higher educational qualifications result inversely in the number of men committed.

LIBRARY.

The institution, under the direction of the chaplain, has by means of the funds granted it by the last legislature and through the good offices of the woman's clubs of the State of Washington, increased its facilities for aiding the men not only in passing the time that cannot be spent in industrial or vocational pursuits, but also in study and helpful reading. Much of the time necessarily spent by the men in their cells is devoted to the reading of wholesome books and magazines of which we have a generous supply from the people and organizations throughout the state. Such contributions have helped mightily to the

good spirit that has been prevalent during the last two years. We again are asking for an appropriation to further this work and its availability will be a material aid in rehabilitating the charges of the state and making them into useful citizens.

RELIGIOUS AND MORAL INSTRUCTION.

Too great importance cannot attach to proper religious and moral instruction as an influence for good in the lives of the men, who have often been entirely without this uplifting guidance. A Congregational minister in residence at the reformatory is principally in charge of this work. He is assisted by a visiting priest of the Roman Catholic church, a minister of the Christian Science faith, and visiting ministers of other denominations and faiths, none of whom are denied services. Not the least good in these different services is the impression made upon the men of the generality of spiritual life, though it may take different forms and be expressed in different creeds. Beyond the general services thus conducted the personal contact of those consecrated to the religious life with the men afford them a new vision and contact of life.

HEALTH CONDITIONS.

Unusually good have been the health and sanitary conditions of the institution and its population, as testified by the reports of the attending physician. Several physicians have visited the institution and rendered gratuitous services to inmates in need of unusual surgical attention, which could best be given by the specialists; especially has this been the case with eye, ear and nose trouble. A majority of the men coming into the institution are physically unsound and require medical attention, in many instances of a serious nature. Since the enactment of the federal drug law, known as the Harrison act, there has been a noticeable decrease in the number of drug users admitted and the enactment in the state of a law curtailing the activities of the liquor traffic has also made its influence felt, perhaps most noticeably. However, in the matter of admissions, in which there has been a decided decrease.

DEPARTMENTS.

The various departments of the institution have united in an effort to realize a state of high efficiency in their several lines of work, the details of which are specifically set forth in their individual reports hereto attached.

REFORMATORY METHODS.

As the principal object of the reformatory is clearly expressed in its name, so the work of the institution has been directed mainly to the reformatory rather than penal features of the work. The greatest factor in work of this kind is to maintain conditions as nearly as possible normal, as that breaks up the tendency to institutionalize its subjects and better fits them to resume the right place in society, when they find themselves free men.

I trust you will find in the various reports of the chiefs of departments, information tending to show that there is an earnest and conscientious desire upon the part of all men connected with the institution to build up the charges placed in our care, physically and mentally, in order that they may leave here cleaned up in body and mind; and that the tables furnished herewith show good results. The percentage of men making good is very gratifying. The spirit of the inmate population is greatly improved in the past eighteen months and today, anyone may note, as they mingle with the men a feeling of self-respect and general desire to live up to the requirements.

These improved conditions are brought about by the officers and inmates working together in a frank, honest way for the best interests of all.

I gratefully acknowledge the assistance and cordial co-operation of your Honorable Board of Managers, individually and as a board. You have continually inspired and encouraged all of us. I wish at this time to express my appreciation of the efforts and spirit of every man engaged in the work of conducting the affairs of the institution. We are also grateful to the federated woman's clubs of this state for good books and magazines. They have made our problem of supplying the men with good reading matter their own, and have faithfully sent throughout the year boxes of reading matter. Many other men and women have spoken to our men and have shown a great desire to help.

Space will not permit the mention of all the favors we have received, but special mention should be given the woman's federated clubs, professors of our state university, ministers of the gospel of all denominations. I believe the future looks brighter than ever before for the upbuilding of human interests in all its phases.

This report, with all the others, is respectfully submitted.

DONALD B. OLSON,
Superintendent.

INMATES SPECIAL FUND ACCOUNT.

SUMMARY STATEMENT

Year Ending September 30	1915		1916	
Balance October 1.....		\$775 21		\$645
Received		2,018 08		1,792
Expended	\$2,148 06		\$1,818 40	
Balance September 30.	645 23		619 47	
Totals	\$2,793 29	\$2,793 29	\$2,437 87	\$2,437

REPORT OF TAILOR SHOP.
MARKET VALUE OF MANUFACTURED GOODS.

MONTH	Year Ending September 30, 1915	Year Ending September 30, 1916
October	\$875 95	\$256 27
November	357 62	180 80
December	417 14	254 53
January	367 40	160 98
February	425 23	118 07
March	499 89	177 78
April	288 58	104 12
May	274 04	116 16
June	238 07	83 64
July	215 92	276 11
August	196 72	89 86
September	317 69	172 88
Totals	\$4,042 15	\$1,990 15

SUMMARY.

Year ending September 30, 1915.....	\$4,042 15
Year ending September 30, 1916.....	1,990 15
Total	\$6,032 30

STATEMENT OF PRODUCTS.

FARM AND GARDEN.

MONTH	Year Ending September 30, 1915	Year Ending September 30, 1916
October	\$1,105 88	\$1,040 11
November	1,228 86	1,394 19
December	681 74	1,016 37
January	460 46	721 92
February	337 43	833 63
March	496 43	870 07
April	826 92	954 54
May	775 77	847 27
June	1,266 14	1,156 47
July	1,666 11	1,427 02
August	1,440 41	1,308 28
September	1,196 67	2,320 84
Totals	\$11,420 12	\$13,875 71

SUMMARY.

Year ending September 30, 1915.. . . .	\$11,420 12
Year ending September 30, 1916.....	\$13,875 71
Total	\$25,295 83

ESTIMATES FOR WASHINGTON STATE REFORMATORY FOR BIENNIUM ENDING MARCH 31, 1916.

GENERAL, OPERATION AND MAINTENANCE.

Based upon average daily per capita cost of \$0.025 for 450 men.

SALARIES AND WAGES—

1 Superintendent	\$6,000 00
1 Physician	2,400 00
1 Secretary-accountant	2,400 00
1 Director of education	3,000 00
1 Executive officer	3,000 00
1 Night captain	2,040 00
1 Detail officer.....	1,800 00
1 Steward	1,800 00
1 Day engineer	2,040 00
1 Night engineer	1,440 00
1 Teacher	1,440 00
1 Truckman	1,440 00
2 Night watchmen. ....at \$100 00	2,880 00
2 Overseers	4,220 00
1 Overseer	1,500 00
3 Overseers	3,600 00
8 Guards	11,520 00
	<hr/>
	\$53,280 00
Other Operations -	
1 Director of agriculture.....	2,040 00
1 Overseer	1,440 00
	<hr/>
	\$56,760 00
Estimated probable increase of force and changes in salary and wage rates on account of length of services and two teachers in Manual Training Department	4,320 00
	<hr/>
Grand Total, Salaries and Wages.	\$61,080 00

GENERAL EXPENDITURES—

Office supplies	\$1,340 00
Telegraph and telephone.....	980 00
Postage	1,040 00
Miscellaneous	800 00
	<hr/>
	4,160 00

OPERATION.

HEAT, LIGHT AND WATER—

Fuel, 4-foot slab wood for power plant and kitchens, 8,250 cords at \$2.00.....	\$16,500 00
Fuel, gas for residence and Hospital.....	670 00
Water	6,520 00
Lubricants	635 00
Repairs for plant	634 00
Electrical supplies and material.....	1,250 00
	<hr/>
	26,229 00

MEDICAL DEPARTMENT—

Drugs and sundries	1,650 00
--------------------------	----------

KITCHEN AND DINING ROOM—

Crockery	\$330 00
Dairy products	2,120 00
Flour	11,900 00
Groceries	15,868 00
Meats	14,977 00
Sugar	3,046 00
Supplies	100 00
Utensils	280 00
Vegetables	2,000 00
	<hr/>
	51,730 00

DORMITORY AND HOUSEHOLD—

Barber shop supplies	\$200 00
Blankets	781 00
Brooms	261 00
Brushes	140 00
Cleansers and soaps	752 00
Pillow material	174 00
Sheeting	392 00
	<hr/>
	2,700 00

UNDRY—Extra washing on account of two bathing days instead of one as formerly	706 00	
BOOK—Supplies, text books and writing material for inmates	1,000 00	
CLOTHING, DRY GOODS AND SHOES.....	24,500 00	
SHOP EXPENSE—		
Blacksmith, plumbing and machine.....	\$1,300 00	
Carpenter shop	750 00	
Paint shop	750 00	
Printing, paper, ink and supplies.....	800 00	
Shoe shop, repair of shoes, harness, etc.....	600 00	
Tailor shop	700 00	
	<hr/>	5,100 00
REGULATIVE—		
Escapes, rewards and expense of pursuit.....	\$2,000 00	
Identification bureau, photos.....	350 00	
	<hr/>	2,350 00
STABLE AND GARAGE—		
Feed for horses, shoeing and veterinary.....	\$5,000 00	
Expense of auto truck.....	2,400 00	
Expense of touring car.....	600 00	
	<hr/>	8,000 00
FARM—		
Dairy stock feed	\$7,006 00	
Veterinary services	386 00	
Medicine	150 00	
	<hr/>	\$7,500 00
Swine feed	\$2,750 00	
Veterinary services	175 00	
Medicine	75 00	
	<hr/>	3,000 00
Poultry feed	2,500 00	
Plant division, seeds and fertilizer to prepare new ground for profitable growing of field and garden produce	3,600 00	
	<hr/>	16,600 00
Total General, Operation and Maintenance.		<hr/> \$205,775 00

FARM STOCK AND EQUIPMENT—

There was allowed last biennium for this purpose the sum of \$7,500.00 and on October 1, 1916, there was a remainder in the fund amounting to \$3,100.00, to be used for finishing laying houses, fencing poultry yards, farrowing pens, hog yards and fencing and cross fencing for the entire 329 acres of state property, tile for drainage, necessary equipment for separating cream, making butter and ensilage cutter, with motor; with the additional new land under cultivation, we should raise enough feed for a much larger herd of milch cows so as to furnish our own dairy products for the population, as such provisions are for better food for the inmates than meats and other articles that have to be purchased. The larger dairy herd, which should be acquired at once, will necessitate a new cow barn and this, with the necessary new equipment for working the increased acreage, will require.....

\$7,500 00

DOMESTIC BUILDING ADDITION—

There is imperative need for the construction of the first 120 feet of the ground floor of the south wing of the domestic building to adjoin the wing already occupied, together with the two-story connecting passageway between this building and the rotunda of the main building. This structure will provide adequate facilities for bathing the inmates and operating the institution laundry, which at present is done in the basement beneath the inmates' kitchen, where the bath room is so small that only a few of the men can bathe at once and the laundry is entirely too small, on account of which it is unhealthy to work there any length of time and gives rise to conditions which impair its efficiency. The construction of this addition is designed to accommodate

the superstructure which is provided for in the general plans; its cost as estimated by the designing architects itemizes as follows:

Excavating	\$400 00
Concrete	6,580 00
Cement finish	1,294 00
Reinforcing	2,289 50
Structural steel	49 00
Steel guards, etc.	1,722 50
Temporary roof boarding.....	160 00
Brickwork	3,710 00
Roofing and sheet metal.....	792 00
Plastering	1,833 00
Mill work and carpenter work.....	1,700 00
Plumbing	6,000 00
Wiring	500 00
Heating	1,000 00
Painting	1,200 00
Hardware	150 00
Cell fronts	2,800 00
Lighting fixtures	250 00
Vent registers	25 00
Incidentals	1,800 00
Architect's fees	1,676 00

25,2

WATER SYSTEM—

The most urgent need of the institution and one than which there is none more important is a water system that will be adequate for the institution's present and future needs, providing pure water and being dependable and independent of outside supply. The previous appropriation of \$10,000 for this purpose has had less than a thousand dollars expended from it for exploration and investigation, as it was considered important that we should have the fullest possible data before deciding upon any plan of installation. After exhaustive investigation and under most capable experting, we believe the most feasible solution of the problem is that contemplated by the items hereafter estimated by R. H. Thomson, C. E., of Seattle, and provide for a water supply in Lake Fontal, some ten miles from the institution:

Pipe line, 10" wire wound wood pipe, from Howard creek to West Howard creek and six-inch pipe from there to administration building and reservoir.	\$11,725 00
Clearing and construction of weirs on both streams.....	1,250 00
Reservoir for 2,000,000 gallons, gates, etc.....	8,800 00
Hydrants, four, on institution grounds.....	280 00
Clearing, grading and preparing ditch from basins to stations	2,500 00
Excavating ditch from station 70 to institution, day labor	3,850 00
Hauling and distributing pipe, day labor.....	325 00
Laying pipe, day labor.....	680 00
	<u>\$29,140 00</u>

Same work with inmate labor.....	\$24,350 00
Water shed, 1,500 acres.....	33,900 00
Right of way, see infra.....	1,000 00
Incidentals, 10 per cent.....	2,925 00

Total for water line.....	\$52,175 00
Headworks, timber	\$1,950 00
Clearing	4,400 00
Dam, with concrete core wall and necessary outlet pipes	2,500 00
Incidentals, 10 per cent.....	895 00

\$9,745 00as 10,000 00

\$72,175 00

Right of way re-estimated by Board of Managers	8,825 00
Included above	1,000 00
	<u>7,825 00</u>

Total

80,00

OIL STORAGE EQUIPMENT—

Our present equipment for the storage of oils is of the most temporary and inefficient character, wasteful, unsightly and highly unsafe. We should have for this purpose proper tanks, pumps, etc., which will cost not to exceed the sum of.....

750 00

SIGNAL SYSTEM MOTOR SET—

Our signal system, bells, etc., operate by dry cells, which have to be renewed frequently, rendering the maintenance costly and at times ineffectual; a small motor generator set would supply all present and future needs, even if a general clock system be installed; the estimated cost of this set will be.....

250 00

REFRIGERATING PLANT—

We have at present a small ice box, wholly inadequate to our needs, which should be replaced by a modern refrigerating plant; the cost of ice per year here averages \$351.91, and under present conditions we cannot keep our supplies fresh and sanitary. In our investigation, we find that a plant adequate to meet our needs will cost approximately \$5,000, and with necessary alterations for its installation, amounting to \$500, will cost.....

4,500 00

INMATES' AND OFFICERS' KITCHEN EQUIPMENT—

We have had laid a new tile floor in the kitchen in the domestic building, the walls have been painted and the room is in fine shape, but our equipment is inadequate; we should have the items hereafter listed, most of which are for the inmates' kitchen, to bring the department to a state of modern sanitation and efficiency:

Main Kitchen—

2 75-gallon aluminum jacketed steam kettles.....	\$440 00
1 40-gallon aluminum steam tea urn.....	200 00
1 2-compartment upright steam vegetable cooker, size B..	230 00
1 Set copper vent pipes to central outlet.....	56 00
2 Food and dish trucks.....	95 00
1 Heavy metal pot and pan sink.....	85 00
1 Power dish washing and sterilizing machine.....	300 00
1 Set metal scrap and clean dish tables.....	75 00
1 All metal blanching sink.....	24 00
4 Dish-up tables.....	95 00
1 Portable pan rack.....	45 00

\$1,794 00

Bake Shop—

Removing and rebuilding bake oven.....	\$1,000 00
1 Dough mixing machine.....	475 00
2 Steel dough mixing troughs, 6 feet.....	110 00
1 Proofing box.....	90 00
1 Pan rack.....	80 00
1 Baker's sink.....	23 00

\$1,788 00

Scullery—

1 All metal vegetable sink.....	\$42 00
1 Vegetable paring machine with motor.....	340 00
2 Maple top work tables.....	60 00
1 Dumb waiter to basement.....	85 00

\$427 00

Storeroom—

Windows, wire mesh, around steward's room.....	\$70 00
--	---------

Officers' Kitchen—

1 Seven foot two-oven range.....	\$135 00
1 Hand power dish washing machine and sterilizing machine and metal tables.....	165 00
1 Steam table and plate warmer.....	135 00
1 Double tea and coffee urn, steam.....	75 00
1 Steam line for same.....	60 00

\$565 00

4,653 00

MANUAL TRAINING AND SHOP EQUIPMENT—

The equipment secured by the funds available from the previous appropriation under this title, have greatly advanced the efficiency of the institution both for its own particular benefit and the further training it provides the men engaged in that work. We now deem it advisable to secure additional equipment as hereafter listed, of which the shoe machinery and sock making machinery will contribute to a reduction of the maintenance cost; we consider that the need for this equipment is so obvious and its value, once installed, so manifest, that no extended argument is necessary:

Shoe making machinery, 22-foot Goodyear welt outfit, with rapid lock stitch sewing machine, dies, lasts, motors, etc., complete.....	\$1,800 00	
Sock knitting machine, complete.....	500 00	
Lathe, 16-inch swing, 10-foot bed.....	1,000 00	
Dise and drum sander finisher and motor.....	1,000 00	
Sundry small tools for shop.....	500 00	
Incidentals, belts, pulleys, shafts, etc.....	375 00	
Printing press, type, equipment and motor.....	1,125 00	
		6,300 00

LAND CLEARING—

There will be a substantial remainder in the appropriation for this purpose as allowed last biennium and whatever it is, should be re-appropriated to enable this work to be carried forward, as we believe it can be completed within our original estimate of \$10,000. The very wet weather in all seasons has prevented us from prosecuting this work as was planned, but with the fund still available, as it would be under this request, we believe the state land at this institution will all be cleared, graded, drained and put into crops in 1917. Estimated balance to be re-appropriated.....

4,000 00

NEW TRUCK—

Under the conditions growing out of the institution being distant from the railroad, all supplies and material have to be hauled; for three years a five-ton truck has handled this but further maintenance of this truck will more than exceed the cost of a new one, which, by trading in the old one, will require an expenditure of.....

3,000 00

TRANSMISSION CABLES AND SWITCHBOARD EXTENSION—

We are renewing our request of two years ago for the extension of our switchboard in the power house to take care of the power of light current for the shop buildings; at present, we have switches and circuit breakers set up on boards in a temporary and unsafe manner. Our light and power cables should be on different circuits for the proper handling as well as for safety; the supports for these cables are of temporary wooden construction, which should be replaced by permanent racks. These, with the additional cables and panel for switchboard, will cost

3,500 00

WALL—

The wall enclosing the main yard is of wooden construction, which will have to be renewed to the extent of planking, to cost.....

1,000 00

MISCELLANEOUS—

Chaplain, salary of.....		2,400 00
Library and Entertainment -		
Piano	\$400 00	
Books -		
Vocational subjects	600 00	
Religious and moral training.....	400 00	
History and biography.....	250 00	
Magazines	150 00	
General reading, fiction, etc.....	800 00	
Motion picture expense.....	200 00	
		2,800 00

(5-7)

ADMINISTRATION BUILDING--STATE REFORMATORY.

RECAPITULATION.

MAINTENANCE, OPERATION AND GENERAL—

For 450 inmates at \$0.625 daily per capita \$206,775 00

CAPITAL OUTLAYS—

Farm stock and equipment.....	\$7,500 00	
Domestic building addition.....	35,200 00	
Water system and right of way.	80,000 00	
Oil storage equipment....	750 00	
Signal system motor set.....	250 00	
Refrigerating plant	4,500 00	
Kitchen equipment	4,658 00	
Manual training and shop equipment	8,300 00	
Land clearing	4,000 00	
New truck	3,000 00	
Transmission cables and switchboard extension.....	3,600 00	
Wall	1,000 00	
		150,658 00

MISCELLANEOUS—

Chaplain, salary of.....	2,400 00	
Library and entertainment	2,800 00	
		5,200 00

Grand Total

\$361,628 00

REPORT OF EXECUTIVE OFFICER.

October 1, 1916.

*Mr Donald B. Olson, Superintendent, Washington State Reformatory,
Monroe, Washington.*

DEAR SIR: I hand you herewith the report covering the work of this office for the biennium ending September 30, 1916.

As the inmate himself is the one of paramount importance and concern in the administration of the institution, I have during the biennium covered by this report interviewed 410 inmates, with the one idea of learning his antecedents, such as family history, nature and reason for criminal offense, environments and associates, home and economic conditions, previous criminal record, if any, and all information that can be ascertained that may prove of assistance in determining the inmate's fitness for work, study, trustworthiness and ultimate parole. In connection with this work and that it might be more thoroughly carried forward a bureau of identification was established in February, 1916. The information and facts learned during these several interviews is placed at the disposal of the superintendent and the department heads.

All assignments to work are made from this office. The physical and mental ability of an inmate for any given occupation is first taken into consideration. His own choice is followed in so far as practicable. As there are some ninety-odd kinds of work that are open to the inmates of the institution it is rarely necessary to assign an inmate to a task that he will find other than congenial. All of the inmates are

urged to take into consideration, in determining his choice of work while in the institution, so that in so far as possible the work he does here will better prepare him for the work that he intends or desires to follow after being paroled. This is in direct accord with the best ideals of the accepted meaning of "reformation." That a man may be taught both the desire and the ability to earn an honest livelihood.

All new arrivals are taken as soon as possible after admittance to the institution before a committee of their fellows, which is called the "Greeters' Committee," the membership of which comprises the editor of the Index, the institution weekly publication, in the capacity of chairman, the chairman of the main building council, one representative from the honor community and one representing the honor tier. The committee advises the new inmate as to what he must do and more particularly what he must not do. Of the many advantages that he may gain for himself as the result of good conduct, the benefits that will accrue to himself if he takes advantage of the opportunities for self-improvement that are afforded him as an inmate of the reformatory, although the latter fact may be enforced and thus a questionable privilege. The "Greeters" are undoubtedly doing a great deal of good, both for the inmate body and for the institution. The appeal that they make to the inmate upon his immediate arrival, when he is wrought up mentally and feels that he has not a friend in the world, is conducive to better spirit among the inmates and therefore to better discipline.

The honor community, a self-governing inmate body, is and has been for nearly three years an established organization. Its officers are all elected from and by the citizens of the community. Any case of misconduct that is committed by a member of the community, or by an alien while in the confines of the community, is brought before the community court. Punishment is meted out in accordance with a penal code that has been approved by the executive officers of the institution. Discipline under the honor system of self-government is of the highest order. The saving to the state which is afforded as a result of the lack of necessity of maintaining disciplinary officers in this building is not the least of many arguments in favor of furthering the honor system.

In accordance with the idea of allowing all possible privileges to the inmates that merit such consideration, both as a reward for exemplary conduct and an incentive to still greater effort along that line, the honor tier was inaugurated in March, 1916. One tier of the main building or cell block is given over to the exclusive use of those inmates who in the opinion of the chaplain, the director of education and myself are deserving of the extra privileges. An inmate in order to be eligible for the honor tier must have been in the institution at least four months, and he must have an unbroken record of the same duration of time without a report. The tendency so far shown by the inmates has been to greatly appreciate these extra privileges and to strive to earn more.

Another inmate organization that has proven of great efficiency is the main building council. There is one man on each tier, he being responsible for the good conduct of all inmates on that tier while in their cells or at any other time while in the charge of a councilman. The discipline of the main dining room is entirely under their charge and is of such excellent order that talking has again been permitted during meals.

During the summer months one hour each day was devoted to military drill. Throughout most of that time there were four companies on the drill grounds.

Although there are no records by which a fair comparison may be obtained, it is safe to assume that the general discipline during the period just ended has been far and away better than that for any like period of time since the institution was established. The conduct for the last year of the biennium was so far above that of the first year that it is only natural to make the assumption.

This improvement in conduct and discipline is a most encouraging condition to all concerned and speaks for itself in behalf of the method now in use in the management of the institution.

One of the natural consequences of the condition of affairs as related in the foregoing paragraph is the increase in the number of trustees that are now at work outside of the large enclosure. A large percentage of the total population are now working on the institution properties outside of the enclosure than ever before in the history of the institution.

Probably the most noticeable feature, as well as the most gratifying, during the entire life of the institution has occurred in the first nine months of the present year. This is the very marked decrease in the number of new men admitted to the institution. Whereas previous to 1916 the average increase in the population was one new inmate each day, so far this year there have only been one hundred and thirty-three (133) new men received at the institution.

The total population at this time is three hundred and twenty (320) inmates. Of this number two hundred and thirteen (213) are in the first grade, ninety-three (93) in the second grade, and fourteen (14) are in the third grade. Of the number in the third grade at this time six (6) of them are inmates who have been returned to the institution as parole violators.

The total number of inmates who have been transferred to the state penitentiary has been twenty (20). The total number of inmates who have been transferred to the state hospitals has been seven (7). The number returned to this institution as cured has been five (5).

At this time I wish to express my appreciation for the earnest co-operation on the part of the officers.

Respectfully submitted,

J. C. WILCOX,

Executive Officer.

REPORT OF CHIEF PAROLE OFFICER.

To the Superintendent and Board of Managers, Washington State Reformatory.

GENTLEMEN: In connection with the report of the parole department, we are submitting some statistics, or tables, showing our work from different angles.

It will be readily seen that the work of this department has grown by leaps and bounds in the last two years. Table No. 1 gives 330 men reporting and 56 in the questionable column, making a total of 386 on parole. Notwithstanding the increase in the number of men paroled, we have tried to keep up the standard of the work. We have endeavored to make the parole department a real help to the men leaving the institution. Table No. 4 will show that the men sent direct to employment have averaged almost as well as those sent to their own homes. It will show that 324 were thus sent out and approximately 600 positions have been secured for the men while on parole during the last two years. We have also used "big brothers" to assist the paroled men and in some cases this has proven very successful.

Hundreds of letters have been written to the men advising, encouraging and helping. Likewise, hundreds of letters have been received from them and their reports, coming in each month, have been carefully read by us, watching always for a chance to help and block any tendency on the part of the paroled man to go back to the old life.

Some people seem to think that the work of the parole department is to apprehend violators and return them to the institution. While this is a part of our work, it is a very small part, in our estimation. Our work, as we see it, is to assist men on parole to live within the law, and keep them out of the institution as long as it is consistent with the rights of others. The men inside the institution usually have a wrong conception of the work of the parole department as the man returned for the violation is inclined to blame everyone but himself for his failure. We have, however, hundreds of letters in the files of the men who have made good, thanking us for the assistance they have received while on parole and commending our methods. Fifteen hundred and ninety-seven cases have passed through this department since its inception and it is very pleasing, in passing from one part of the state to another, to meet the men making good in their own little sphere.

We are doing more than most institutions for the men on parole, but we are not satisfied, nor will we be until we know that everything possible is being done for the men. Two parole officers cannot give the 386 men the attention that they should, for it is not only necessary that these men be visited at frequent intervals but work must be secured

or nearly all of them; "big brothers" found for some; homes of others must be looked up; and often we must straighten out their troubles and smooth their difficulties. The men on the inside we must get acquainted with and prepare them for their release and there are always the parole violators to be looked up and, if apprehended, returned to the institution. In this connection we wish to recommend that an appropriation be asked for sufficient to put two more parole officers in the field. We believe that the encouragement, assistance and protection given to the men on parole is an essential part of the work of reformation and must not be neglected.

It is very encouraging to notice the decrease in commitments to the institution since the first of the year. In the first eight months of 1915, 250 were committed to the institution, while in the same period of 1916, only 122 have been sent to us. It is doubly encouraging, however, to the parole officers to notice the improvement of the men on parole. They have no longer to fight the temptation of the open saloon and the environment around them has improved one hundred per cent. It is interesting in this connection to note the figures in Table No. 5. We look forward to even better records as the prohibition law is better enforced and our young men learn that they can get along without intoxicating liquors.

While the population of the institution has decreased in the last year, it will be some time before the parole department is affected as the men now in the institution must go through this department.

We wish to express at this time our appreciation for the assistance given us by many friends and employers throughout the state. Without the help of these men we would be greatly handicapped in our work of assisting paroled men.

Respectfully submitted,

C. T. WEBB.

Chief Parole Officer.

Table No. 1.

SHOWING RECORD OF MEN PAROLED.

DATE	Number Paroled	Total Violators	Final Discharge	Reporting	Total Without Violation	Percentage Without Violation
All paroles prior to January 1, 1915.....	1,066	330	689	47	736	69.1
January 1, 1915.....	298	89	79	125	204	68.9
January, 1916.....	66	10	1	45	46	82.1
April, 1916.....	102	11	.....	91	91	89.2
May, 1916.....	15	2	.....	13	13	86.7
July, 1916.....	66	8	.....	62	62	95.4
Totals.....	1,597	445	769	388	1,182	72.1

Table No. 2.
SHOWING PERCENTAGE OF MEN COMMITTING CRIME AFTER
LEAVING THE INSTITUTION.

MEETING	Number Paroled	Known To Have Committed Crime	Total Without Crime	Percent- age Without Crime
October, 1914	60	8	61	88.3
December, 1914	18	3	15	83.3
January, 1915	53	9	43	81.1
April, 1915	67	8	59	88.0
July, 1915	91	12	79	86.8
October, 1915	64	7	57	89.1
December, 1915	19	.....	19	100.0
January, 1916	58	5	51	87.9
April, 1916	102	1	101	99.0
May, 1916	15	.....	15	100.0
July, 1916	65	.....	65	100.0
Totals.....	618	58	565	91.4

Table No. 3.
SHOWING NUMBER OF MEN COMMITTED FOR DIFFERENT
CRIMES AND RECORD MADE ON PAROLE.
INCLUDING ALL MEN PAROLED UP TO JANUARY 1, 1915.

CRIME	Total	Violators	Per C
Grand larceny ..	241	100	41.5
Burglary ..	226	101	44.7
Forgery ..	125	70	56.0
Assault ..	49	9	18.4
Robbery ..	22	4	18.2
Larceny from the person ..	15	7	46.7
Rape ..	13	1	7.7
Carnal knowledge ..	12	3	25.0
Abduction ..	9	3	33.3
Sodomy ..	8	2	25.0
Horse stealing ..	8	2	25.0
Damage to property.....	8	1	12.5
Incest ..	7	.....	.....
Living off earnings of a prostitute..	7	2	28.6
Embezzlement ..	7	.....	.....
Selling liquor ..	6	3	50.0
Receiving stolen property.....	5	2	40.0
Obtaining money under false pretenses.....	5	1	20.0
Adultery ..	4	.....	.....
Manslaughter ..	3	.....	.....
Breaking jail ..	3	2	66.7
Willful neglect of family.....	2	2	100.0
Attempted suicide ..	2	1	50.0
Perjury ..	2	.....	.....
Bigamy ..	1	.....	.....

Table No. 4.

**SHOWING MEN PAROLED TO THEIR HOMES COMPARED WITH
MEN SENT DIRECT TO EMPLOYMENT FROM OFFICE.**

COVERING PERIOD FROM OCTOBER 1, 1914, to OCTOBER 1, 1916.

	Paroled	Total Violators	Per Cent.	Total Without Violation	Per Cent.
Men sent direct to home.....	296	64	21.6	232	78.4
Men sent direct to employment.....	324	88	27.2	236	72.8

Table No. 5.

**COMPARING REPORT RENDERED SEPTEMBER, 1915, WITH THAT
RENDERED SEPTEMBER, 1916.**

PERIOD	Number Paroled	Returned	Other Violators	TOTAL Violators	Per Cent.
January 1, 1915, to September 1, 1915..	210	9	31	40	19.0
January 1, 1916, to September 1, 1916..	236	3	23	26	10.9

REPORT OF DIRECTOR OF EDUCATION AND VOCATION.

MONTROSE, September 30, 1916.

Hon. Donald B. Olson, Superintendent, Washington State Reformatory.

DEAR SIR: I hand you herewith the report of the work done in the department of education and vocation for the biennium ending September 30, 1916.

Education means a "drawing out" of all the possibilities there are in a human being. By the ignorant and untrained, education is regarded as merely knowledge-getting—cramming one's mind full of facts. Quite often we hear ignorant men say they prefer a "practical" man for their work rather than an educated man; that a college training unfits a man for practical affairs. Such men are usually most impractical themselves, for they believe that knowledge, training and insight stand in the way of effectiveness, and that guess-work plus hard knocks contribute towards it. In addition to lacking knowledge they lack also the drawing out or cultivation of their faculties which we call education, and which would enable them to become really practical men, recognizing what genuine practicality means. My three

years' work in this institution has been an organized effort to train the inmates entrusted to our care so that they may utilize as much as possible of their natural talent along the lines of correct citizenship, which includes ability to make a living as well as an understanding and appreciation of their relations to their fellows. It has been the steadfast purpose of this department to co-ordinate mere learning of facts with the work of each man's life to the end that every faculty of his mind and body may be educated, or drawn out to its fullest capacity for usefulness. That is why the vocational, or trade school training, belongs with the academic training in every man's education.

Very few inmates get into this institution who are educated even in a small degree. True, many of them have gone through the schools and have learned many facts. But most of them have not co-ordinated these facts with life, and hence lack that drawing out, or development of all their powers for good, which constitutes real education. The typical inmate is a drifter. He takes the path of least resistance. He has never "found himself" to the extent of knowing what he can do or what he ought to do, or even what he would like to do. Such a man needs discipline. He needs an opportunity for self-discipline, physically, mentally and morally. A glance at the statistical report prepared for this biennium will show that more than half the inmates had less than an eighth grade education when they entered, and that nearly two-thirds of them were common laborers. This fact is not a mere coincidence; it is true for the year 1914; it is true for the year 1915; and it is true for the year 1916. There does seem, therefore, to be a very close relation between educational unpreparedness and the tendency to get into a corrective institution.

VOCATIONAL GUIDANCE.

In addition to the interviews which elicited the information contained in the statistical report, I have interviewed each inmate soon after he came into the institution with a view of determining his mental habits and vocational aptitudes. The majority who have not chosen their life work when they enter here have taken so little note of their experience in life that they are ill prepared to choose intelligently what they would like to do. This matter has been gone into thoroughly with each lad until most of them have made definite plans for the future, and put forth some effort to prepare themselves for the same. The academic training which they then need for their respective callings is planned with a practicality and sensibleness that enables them to accomplish much more than they could otherwise do in the short time they have for school while in the reformatory.

MENTAL DEFECTIVES.

In the last biennial report I recommended the segregation of inmates markedly defective from those that are normal. This has been partially accomplished by the occupation of the main building, or cell house, and in school by the application of the Binet tests of mentality.

ut in the matter of work and general association in the yard and in the assembly meetings it remains to be worked out. The new shop building and the consequent use of more skilled trades, and the cultivation of more farm land will make this matter more easily accomplished.

THE SCHOOL.

During the school year of 1914-1915 the school was in session continuously throughout the year, except for two weeks in the latter part of August. During the year of 1915-1916 the work was conducted regularly until July 31st, when the classes were dismissed for the summer vacation extending through August and September. Classes were maintained six days each week in all the eight grades of common school work, in vocational training for all of the trades we have been able to utilize here, and in the Spanish language. Classes have also been conducted in shorthand, but lacking typewriters we were not able to make the work in stenography of practical use. Report was made each month to the superintendent of the enrolment, classification by grades, average attendance, and progress made. Following is a summary of each year's enrolment and attendance:

MONTH	Enrolment	Average Attendance	
October, 1914.....	151	147	Including night school
November, 1914.....	145	138	Including night school
December, 1914.....	149	143	Night school not included from this on.
January, 1915.....	137	132	Classes in cutting, drafting, journalism, literature and expression, and citizenship were held somewhat irregularly during the year, chiefly in the evenings. Enrolment not included in these figures.
February, 1915.....	143	136	
March, 1915.....	133	107	
April, 1915.....	150	141	
May, 1915.....	140	134	
June, 1915.....	148	139	
July, 1915.....	163	146	
August, 1915.....	123	100	Band enrolment included in August and September.
September, 1915.....	147	140	
Average for year.....	138.4	144	

MONTH	Enrolment	Average Attendance	
October, 1915.....	153	145	Classes in literature, journalism, citizenship, agriculture, history and geography and science, by means of moving pictures were held during the year enrolled 80 to 100 students, not included in these figures.
November, 1915.....	149	140	
December, 1915.....	176	163	
January, 1916.....	185	169	
February, 1916.....	192	177	
March, 1916.....	172	161	
April, 1916.....	149	116	
May, 1916.....	126	110	
June, 1916.....	125	111	
July, 1916.....	127	112	
August, 1916.....			
September, 1916.....			
Average for year.....	155.1	140.6	

The policy of the institution is to require every inmate to attend day school who has not had a common school education, although men in the tailor shop, trustles on crew No. 4, and some other outside crews were not permitted to attend. The secondary work is voluntary, but due credit is given for good work done in the higher grades. Owing to the short time the boys have for school work, the course of study has been intensified and made just as practical as possible. Three branches are specialized, namely, reading, composition and arithmetic. History, physiology, geography and civics are taught as reading lessons; while penmanship, spelling, punctuation, etc., are taught in conjunction with composition. Above the sixth grade arithmetic is specialized. Those students looking to a clerical or business vocation are given percentage and its applications, or business arithmetic, bookkeeping, etc., while those preparing for one of the trades are given mensuration, square and cube root, drafting, etc. The methods of instruction employed take into consideration that the students are grown-up men, who are not interested in the class of material that young children are; we therefore use subject-matter which attracts and holds their interest. With a course so intensified, and bearing directly upon each individual's trade, we are enabled to do much more than the usual work in a given time. It is not unusual for our men to advance a grade or year's work in from six to eight weeks.

TRADES.

The matter of determining the aptitudes and vocational preference of the men, and assigning them to work for which they are fitted by natural bent and previous training has exercised a far-reaching effect on the discipline and general spirit of the inmates of the institution, changing them from a surly, dissatisfied body of men "doing time" to a body of men interested in their work, and because of this, hopeful for the future, tractable and amenable to discipline. When men are assigned to compulsory labor without regard to their aptitudes, they often become dissatisfied, and among dissatisfied men a very small grievance will breed a riot; but when men are given work to which they are adapted they soon get an "object in life," and settle down to improve themselves. This department had the assignment of the men long enough to inaugurate a change from the old methods, a change which resulted in very noticeable improvement in the temper and behavior of the inside men, due very largely, I think, to satisfied men. Our records show conclusively that of the men who learned a trade here, or worked at their trade while here, very few have returned to this or any other penal institution, most of our recidivists have worked at unskilled labor, or were allowed to change often from one occupation to another. It is my belief, therefore, that the inmates should be assigned to their trades only after a thorough study of their capabilities, and then should not be assigned to another job unless a very palpable mistake has been made in the first diagnosis.

The farm offers one of the best opportunities for men to learn a profitable calling. "Back to the soil" now means specialized farming, such as dairying, poultry raising, stock raising, hog raising, truck farming, berry and fruit growing, in addition to the ordinary pursuit of general farming. The carpenter shop is equipped with machinery and is giving training to a number of men. With the completion of the new shop building machine-shop equipment will be installed, giving employment to others. Notwithstanding the conflict of testimony on the subject, I am convinced from a thorough investigation that shoes for the inmates could be made here at a considerable saving to the institution, and I desire again to recommend that machines be installed to sew the uppers for the shoes required by the inmates, and that the soles be welled by hand. This will teach a useful trade to another group of men. We require at least fifteen inmates in clerical positions. I recommend installing a few typewriters in the school so that men may be trained to fill these places acceptably and at the same time fit them for making a good living outside. It is almost always difficult to find suitably equipped men to fill the places of outgoing clerks. With the typewriters installed, their training would be a matter of regular repetition, and much time would be saved by eliminating the lost motion due to "breaking in" a new man in a responsible clerical position. The tailor shop not only makes all the work clothes, uniforms and going-out suits for the inmates, but it equips many lads for good jobs when they go out. The print shop trains a few men well, and if possible it should be enlarged so as to do the printing for the state board of control, in addition to what they do now. The electrical work and plumbing of the institution can furnish employment for only a few men, except, of course, when extensive building is being done. Cooking, baking, and laundry for the institution also trains a few men in useful trades.

ENTERTAINMENT AND ATHLETICS.

Closely associated with school work, and having an educational value, is the matter of recreation and play. To relieve the dull gray of routine life, to encourage physical health and development, and to render life inside more nearly normal, Saturday afternoons and evenings are devoted to athletics and entertainment. Baseball, basketball, and other forms of athletic sports, the moving picture machine and the vaudeville performances of the inmates have furnished relaxation for the men, and have also been of considerable educational value as well. I believe that football, as now played, could also be used to advantage. The programs and games for the past biennium have been uniformly high class, and the results for good on the inmates seem to fully justify the energy spent in this branch of institution activities. The evening classes in literary society, debating, journalism and the educational movies have all contributed to the growth, development and self-control of the inmates participating therein.

RECORD OF INMATE STANDING.

Since the fitness of the inmate for parole depends largely upon the mental and industrial improvement he has made, this department has been charged with the work of preparing the data showing the standing of each candidate for parole in work, school, behavior and general moral character and tabulating the same for the use of the board of managers at each meeting. About one thousand applications for parole have been reported upon in the last biennium. The record book, into which all the reports of the different activities are assembled, facilitates the work by familiarizing each department with what is being done in every other department.

THE INDEX AND PRINT SHOP.

The Index is the inmates' paper, edited and printed entirely by them. It is and has been a power for good among the inside men, and has also served as a medium to keep the public in touch with the objects and purposes of the Reformatory. It exchanges with nearly all the papers of the state, many of which occasionally reprint articles from its columns. The print shop, in addition to getting out the Index each week, does all the job printing required by the institution. Six or seven men have been the working force employed all the time. Several have learned the trade sufficiently well to go out and make good records in outside print shops. In my judgment, it would be well to recommend that the legislature give us the authority to do printing for other institutions, such as the Hospital for the Insane, the Feeble Minded, etc., install better equipment and give an opportunity for a larger number to acquire a knowledge of the printer's art.

TRAINING FOR CITIZENSHIP.

The whole object of a reformatory is to train the men who are sent here for citizenship, and to turn them back into society fitted to take up their duties as good citizens. Citizenship implies a two-fold training; first, efficiency in earning power; and second, right understanding of one's relation to society. A good stiff course in labor, developing knowledge and skill in some trade, is in my judgment the most important single factor in reform. To that end the school, the shops and the other work crews have been provided. To understand one's relations to society, his rights and duties therein, is not a whit less important. Ordinarily institutional life does not provide anything which compels inmates to exercise initiative. They must necessarily follow closely the routine, go to bed, arise, go to meals, go to work, and quit work at a given signal. To overcome this difficulty somewhat an experiment in self-government was planned, mention of which was made in my report two years ago. The superintendent authorized the organization of a body of trustworthy men into a self-governing group, to make and enforce their own rules, within certain limits. They have gradually been given a larger and larger share in their government as

they merited it. In order to become eligible to participate in this honor community of responsible self-government it is made necessary by the rules for them to take a course of studies in citizenship. I have given this course to four groups of inmates in the past two years, and have begun on the fifth. The fourth administration is in power now, and I feel sure the record they have made has more than justified the experiment. The members of this will be better citizens for the outside, more alert to their rights and duties than if they had not received this training.

THE PERSONAL INTERVIEW.

The most effective, the most important, the most satisfying part of my work is one of which least can be said in terms of statistics, or general report. I refer to the personal interviews I have had with the inmates upon their request. When a man has something on his mind of which he wishes to relieve himself, or when he wishes to be understood, then comes the best means of getting in real touch with him. Often quite unexpectedly, both to the inmate and myself, one of these interviews will disclose the key to his innermost thoughts and open the way to help him "find himself." The personal element is the greatest force. I have taken advantage of every opportunity offered to utilize it, and discretion in offering the personal help, whether it be advice, sympathy, encouragement or reproof. Reports of these interviews could not reflect the deeper significance of the mutual understanding and basis for a resolve to do better things.

Respectfully submitted,

J. M. TADLOCK,

Director of Education and Vocation.

REPORT OF THE DEPARTMENT OF SOCIAL SERVICE AND MORAL EDUCATION.

Mr. Donald B. Olson, Superintendent:

Our library consists of 4,500 books and a large but variable number of out-of-date magazines, furnished us mainly through the generosity of the woman's clubs, church societies, editors and other individuals.

The state legislature at its last session also made an appropriation for this purpose which has been of valued assistance.

Less than one-fifth of our books are of a nature to supply the popular demand, but this usable one-fifth is always active. More current magazines, reference works, vocational books and periodicals, and attractive biography and fiction would increase the good thinking, social value of our men.

Our officers, as well as inmates, make increasing use of our library. Our community is small and isolated. We have no other source for

mental stirring. Therefore, such magazines as the *World's Work*, the *American Magazine*, *The Literary Digest*, *Current Opinion* and *The Independent* come into our midst to renew the higher life of our whole community. "Expect poison from stagnant water" applies to prison and similar institutions as nowhere else.

Moral development, the main aim of our institution, is stimulated by well adapted literature furnished by the state.

The weekly assembly considers the great questions of character and citizenship. It has been addressed by some of the best and most useful citizens of Washington.

Enthusiastic smaller meetings are weekly occurrence. Group study and individual ethical instruction have developed into a thorough system, meeting the needs and interests of every grade and type.

This source of ethical instruction is based on the Bible, printed by the institution, and is easily associated with the different religious meetings regularly in progress. The constant assistance of inmates and officers, and many helpers from the outside, have enabled us to make this program effective. I gratefully acknowledge the splendid service of my colleague, Father Kelly, in almost four years of mutual co-operation.

Miss McKnight in representing the Christian Science church here has won the respect of all who know her.

Members from many churches have stood ready at all times to do whatever was needed to be done in the line of religion and social service. This assistance of outside friends and organizations, working through and with this department, can alone give adequate ministry to the great social and religious needs of this institution.

The larger duties of the chaplain have gone far beyond the organization and instruction. He belongs to the personal problems of every inmate regardless of creed, class or party.

By individual interviews, inspection of incoming mail, correspondence with friends of inmates, specialized study and co-operation with other departments, the chaplain endeavors to familiarize himself with the special needs of every inmate. To finally put this work on a scientific basis has been the aim of this department since the inception of the institution. Every year has marked progress, but there is much yet to be attained.

The nature of this private work can not be described in statistics or figures. Certain external features of the regular social work may be of interest. Sunday evenings might be characterized as the three-hour Sunday school with the usual rally service and class meeting.

One evening is devoted to interviews which are requested by inmates. One evening is spent pleasantly enough in visiting from room to room. One evening is regularly occupied by a prayer meeting and instruction for those who need special assistance in the moral study courses.

The moral education is based on the private correspondence idea, because privacy and individual attention are essential to the best results. Each lesson is also linked with an introduction to some special reading in the library and to the educational, vocational and practical aspects of the institution life. Thus every facility of our library is utilized in the proper connection for individual development and morality is demonstrated to be inseparable from everyday duties and opportunities.

The main responsibility for reformation and regeneration is intelligently put upon the individual inmate as he is able to bear it.

All departments of our institution are harmonizing and progressing more and more towards the common end of practical moral upbuilding.

Many men have seemed to respond to our efforts and prove their value here and in after-institution life.

Respectfully,

W. WITHINGTON, *Chaplain.*

REPORT OF ATTENDING PHYSICIAN.

September 30, 1916.

Mr. Donald B. Olson, Superintendent, Washington State Reformatory, Monroe, Washington.

DEAR SIR: I herewith hand you my report covering the work done in the medical department of the Washington State Reformatory from October 1, 1914, to September 30, 1916.

Apart from the statistical tables included therein, the following information is submitted:

During the whole of the time included in this report the institution has been free from contagious diseases, with the following exceptions:

For a period of four weeks, from May 1, 1915, we had one case of typhoid fever which terminated in recovery and without spreading the disease to other inmates. Again, for a period of four weeks, from March 10, 1916, another case of typhoid developed. Following this, anti-typhoid inoculations were given to all inmates and to a majority of the officers. Since that time no further cases of typhoid fever have developed. In January, 1916, one case of scarlet fever developed, and the case was immediately isolated and further extension of this disease was thereby prevented.

In the matter of venereal diseases, our records show that of the incoming inmates 14 per cent have gonorrhoea, 4½ per cent have syphilis, and 1 per cent suffer from some other form of venereal disease. As has heretofore been the case of handling of this class of dis-

ease, it has been the most difficult part of the work of this department. It is a matter of satisfaction that with the form of segregation it has been possible to maintain that no case has come to my attention in which the disease has been communicated from one inmate to another in the institution.

The percentage of inmates suffering from tuberculosis on admission has slightly increased, 49 cases of this disease having been admitted during the time covered by this report. In the majority of the cases the disease has been localized in their lungs, with a small number of tubercular glands and tubercular bone disease. The result of treatment in these cases has been one of the most satisfactory features of my work. In connection with the tubercular situation it is of interest to note that the entire dairy herd, supplying milk to the institution, has been placed under the supervision of the state board of agriculture, and that no cows excepting those which have passed the tuberculin test by a state veterinarian are kept on the institution farm.

Since the passage of the Harrison anti-narcotic bill, the number of inmates addicted to the use of drugs, especially morphine and cocaine has been largely decreased.

Through the services of the state dentist at frequent intervals diseases of the mouth, tongue, teeth and tonsils have noticeably diminished. This service is of the greatest importance and should be maintained.

In November, 1915, through the kindness of Dr. George Swift, of Seattle, a large number of inmates who had complained of ocular trouble were submitted to examination and treatment instituted.

Throughout the period of time covered in this report inspections of all dormitories, kitchens, toilets and bath rooms have been regularly made, and the food served to the inmates has been examined at frequent intervals. It is my opinion that this food has been at all times of good quality, properly prepared and served in sufficient amounts.

The arrangement by which a special diet kitchen has been in service for the use of hospital patients is still in vogue and has proved extremely satisfactory. An unlimited supply of such foods as milk, cream, eggs, fruit and fresh vegetables has been constantly available.

Temporary isolation hospital was built with a capacity of about four men and has been used when required. The lack of a permanent isolation hospital is still felt and increases the difficulty and greatly diminishes the efficiency of my department.

It is a pleasure to testify to the hearty co-operation of the heads of our other departments, without which much of the work done, especially in preventing diseases, would have been impossible.

Respectfully,

DR. H. K. STOCKWELL,
Attending Physician.

1-1

NEW CELL BLOCK AT STATE REFORMATORY.

WASHINGTON STATE REFORMATORY, MONROE, WASH.

Mr. Donald B. Olson, Superintendent, Washington State Reformatory.

DEAR SIR: I hereafter present my report for two years, beginning with October 1, 1914, ending September 30, 1916.

Very truly yours,

DR. H. K. STOCKWELL,
Medical Department.

SUMMARY.

From October 1, 1914, to September 30, 1916.

Number of cases in hospital October 1, 1914.....	6
Number of cases admitted to hospital from October 1, 1914, to September 30, 1916.....	819
Number of cases discharged from hospital cured.....	755
Number of cases discharged from hospital improved.....	51
Number of cases remaining in hospital under treatment September 30, 1916.....	4
Number of cases died.....	3

LIST OF DEATHS FROM OCTOBER 1, 1914, to SEPTEMBER 30, 1916.

Date	No.	Diagnosis	Died
December 9, 1914.....	1,886	Heart disease	5:45 p. m.
January 18, 1915.....	1,472	Nephritis	5:06 p. m.
March 5, 1916.....	1,921	Acute dilation of the stomach and peritonitis.	8:15 p. m.

Surgical Cases Treated at the Dispensary From October 1, 1914, to September 30, 1916.

Abscesses	10	Lacerated hand	17
Alpoeia	3	Lacerated finger	93
Appendicitis	4	Lacerated head	7
Bruised knee	16	Lacerated thumb	5
Bruised arm	14	Lacerated leg	7
Bruised leg	21	Lacerated face	3
Bruised finger	61	Lacerated wrist	3
Bruised toe	17	Lacerated arm	7
Bruised hand	8	Lacerated eyelid	2
Bruised thumb	9	Lacerated lip	5
Bruised foot	17	Lacerated nose	2
Cyst in neck	4	Lacerated scalp	4
Concussion of brain	1	Lacerated chest	2
Carbuncles	2	Lacerated ear	1
Dislocated knee	2	Muscle bruise	19
Dislocated metacarpal	2	Old empyema	1
Dislocated arm	3	Old Potts fracture.....	2
Dislocated jaw	1	Poison bee sting.....	3
Dislocated thumb	3	Orchitis	2

Exostosis jaw	1	Otitis media	39
Enlarged turbinate	15	Pruritis ani	7
Foreign body removed from eye..	29	Phimosis	21
Foreign body removed from hand..	2	Potts fracture	3
Foreign bodies removed from finger	5	Puncture wound, foot.....	6
Fistula	10	Puncture wound, finger.....	5
Fibrous tumor (neck).....	1	Puncture wound, wrist.....	2
Fractured phalanges	4	P. O. hernia.....	4
Fractured inferior maxillary.....	1	Quinsy	12
Goltre	10	Ruptured blood vessel.....	3
Hemorrhoids	21	Rectal tumor	2
Hernia	17	Synovitis of knee.....	3
Hydrocele	7	Sebaceous cyst	3
Infected scalp	6	Stye	10
Infected nail	4	Single tenotomy	1
Infected toe	16	Sprained wrist	23
Infected lip	3	Sprained thumb	7
Infected scrotum	4	Sprained fingers	27
Infected hand	6	Sprained arm	8
Infected arm	2	Sprained ankle	23
Infected fingers	19	Sprained leg	15
Infected gums	3	Sprained hand	17
Infected foot	7	Sprained toe	5
Infected leg	2	Sprained foot	5
Insect bites	10	Sprained shoulder	3
Inflammation of the hamstring		Sprained elbow	18
tendon	3	Sprained back	26
Inguinal adenitis	2	Sprained muscles	8
Ingrown nails	11	Sprained knee	5
Tooth extraction	109	Venereal sores	5
Tuberculosis of bone (fibula)....	2	Varicose veins	21
Lacerated neck	2	Varicocele	33
Lacerated toe	7	Ulcerated tooth	
Lacerated foot	6		

**Medical Cases Treated at Dispensary From October 1, 1914, to
September 30, 1916, Inclusive.**

Anaemia	48	Influenza	33
Arthritis	63	Intertrigo	4
Acne	69	Incontinence urine	5
Adenitis	7	Insomnia	9
Asthma	23	Jaundice	4
Blepharitis	1	Lumbago	54
Bronchitis	52	Laryngitis	17
Burns	10	Myalgia	60
Chilblains	5	Migraine	12
Conjunctivitis	75	Neuralgia	37
Corns	33	Neuritis	3
Cystitis	15	Nocturnal emissions	7
Coryza	217	Nephritis	7
Constipation	290	Old empyema	1
Colic	30	Orchitis	4
Colitis	40	Osteomyelitis	1
Catarrh (nasal)	40	Pyorrhoea	36
Chancres	7	Psoriasis	7
Chapped hands	40	Palpitation	12
Dog bite	7	Pleurisy	12

Dermatitis	122	Pediculosis pubis	21
Diarrhoea	16	Pruritus ani	2
Dysentery	2	Plumbism	1
Duodenal ulcers	2	Pharyngitis	3
Endocarditis	6	Ring worm	4
Epistaxis	9	Rectal irritation	2
Epilepsy	3	Rectal catarrh	1
Eczema	10	Syphilis	41
Fallen arches	47	Scabies	33
Fruunculosis	67	Stomatitis	40
Gonorrhoea	79	Sun burn	10
Gon. arthritis	10	Sore feet	42
Gastritis	0	Tonsillitis	92
Headache	174	Toothache	197
Herpes	9	T. B. glands	9
Hyperacidity	3	Tape worm	3
Iritis	2	Torticollis	11
Indigestion	103	Urticaria	8
Urethral stricture	33	Ulcerated anus	1
Vitelligo	1	Morphinism	3
Adentia	3	Mental condition (obser.)	11
Anaemia	16	Mucous colitis	1
Arthritis	22	Migraine	5
Asthma	6	Malaria	2
Acute epidymitis	1	Neuralgia	8
Buboes	2	Organic heart trouble	3
Bronchial asthma	8	Palpitation	4
Burns	3	Pleurisy	6
Bronchitis	27	Plumbism	1
Conjunctivitis	11	Pneumonia	3
Coryza	185	Rheumatism	7
Chronic constipation	5	Scabies	8
Cervical adenitis	1	Scarlet fever (isolated)	1
Dermatitis	11	Dysentery	3
Endocarditis	2	Epilepsy	2

**Medical Cases Treated at the Hospital From October 1, 1914, to
September 30, 1916.**

Gonorrhoea	5	Syphilis	12
Herpes	1	Stomatitis	7
Indigestion	5	T. B. glands	6
Influenza	24	Tonsillitis	77
Jaundice	6	Torticollis	2
Lumbago	31	Tuberculosis	49
Typhoid fever (isolated)	2	Veneral	2

**Surgical Cases Treated at the Hospital From October 1, 1914, to
September 30, 1916.**

Appendicitis	11	Hernia	5
Amputated finger	1	Hydrocele	2
Circumcision	20	Infected nail	4
Concussion of the brain	1	Infected hand	3
Chronic Osteomyelitis	1	Infected toe	2
Dislocated metocarpal	1	Infected gums	3
Dislocated elbow	2	Infected scrotum	1
Defected septum	1	Inflammation of hamstring tendon	1

Excision ingrown nail.....	19	Inflammation of tendon of foot..	1
Eye enuc leation.....	1	Lacerated leg	3
Foreign substance removed from		Lacerated forehead	1
eye	5	Lacerated eyelid	2
Fistula	5	Lacerated lip	2
Fractured inferior maxillary.....	1	Lacerated finger	3
Fibrous tumor	1	Multiple abscesses	2
Furunculosis	18	Otitis media	10
Ganglion of tendon forearm.....	1	Old empyema	1
Hemorrhoids	10	Old gunshot wound.....	1
Orchitis	6	Old shoulder fracture.....	1
Potts fracture	3	Synovitis	1
Puncture wound, foot.....	1	Tenotomy	1
Quinsy	3	Synovitis knee	1
Rectal abscess	1	Tooth extraction	7
Sprained ankle	5	Tonsillectomy	7
Sprained foot	3	Thumb amputation	1
Sprained knee	5	Ulcerated tooth	6
Sprained back	4	Varicocele	16
Wrenched back	2		

Table No. 1.
MOVEMENT OF POPULATION.
ADMITTED.

	Year Ending September 30, 1915	Year Ending September 30, 1916
In institution October 1, 1914.....	416	
In institution October 1, 1915.....		456
Received from courts.....	316	196
Received from Washington State Penitentiary.....		1
Escapes returned	2	4
Parole violators returned.....	35	22
Returned from insane hospital.....		4
Returned for investigation.....	1	
Returned for employment.....	5	2

RELEASED.

	Year Ending September 30, 1915	Year Ending September 30, 1916
Released on parole.....	226	306
Released on conditional pardon.....	41	17
Sick leave	1	
Leave of absence.....	1	
Transferred to Washington State Penitentiary.....	7	10
Transferred to insane hospital.....	2	4
Died	2	1
Delivered to other authorities.....		2
Escaped	14	14
Pardoned	1	9
Discharged	4	5

Table No. 2.
SHOWING COUNTIES FROM WHICH INMATES COMMITTED.

COUNTIES	Year Ending September 30, 1915	Year Ending September 30, 1916	Total
Adams	8	3	11
Asotin	2	2	2
Benton	2		2
Ocheltai (Grays Harbor)	4		4
Chelan	2	3	5
Clallam	1	2	3
Clarke	11	9	20
Columbia	4	4	8
Cowlitz	4	2	6
Douglas	3	1	4
Ferry	1	2	3
Franklin	3	2	5
Garfield	1		1
Grant	2	1	3
Island		1	1
Jefferson	1		1
King	122	57	179
Kitsap	5	1	6
Kittitas	7	13	20
Klickitat	4		4
Lewis	15	12	27
Lincoln	3		3
Mason	1		1
Okanogan	8	6	14
Pacific		1	1
Pierce	24	11	35
Skagit	4	3	7
Snohomish	11	6	17
Spokane	30	18	48
Stevens	3	2	5
Thurston	2	1	3
Wahkiakum	1		1
Walla Walla	8	6	14
Whatecom	7	5	12
Whitman	12	5	17
Yakima	14	10	24
Totals	328	185	513

Table No. 3.
SHOWING AGES GIVEN BY INMATES.

AGE	Year Ending September 30, 1915	Year Ending September 30, 1916	Total
15.....	1	1	2
16.....	7	3	10
17.....	19	9	20
18.....	29	14	43
19.....	28	20	48
20.....	36	13	49
21.....	25	22	47
22.....	30	22	52
23.....	29	17	46
24.....	36	15	51
25.....	17	8	25
26.....	18	19	37
27.....	18	6	24
28.....	19	8	27
29.....	12	4	16
30.....	4	2	6
31.....		2	1
Totals	328	185	513

Table No. 4.
SHOWING CRIME OR OFFENSE OF INMATES.

CRIMES	Year Ending September 30, 1915	Year Ending September 30, 1916	Total
Adultery	1		1
Arson, first degree.....	3		3
Arson, second degree.....	2	5	7
Assault, first degree.....	4		4
Assault, second degree.....	6	10	16
Bigamy		1	1
Blackmail		1	1
Burglary, first degree.....	65	22	87
Burglary, second degree.....	70	30	100
Burglary, attempted	2	1	3
Carnal knowledge female child.....	1	3	4
Conveying instruments into jail.....		1	1
Delinquency (re female).....		1	1
Extortion	1		1
Forgery	45	13	58
Gambling		2	2
Grand larceny	102	76	178
Grand larceny, second degree.....	1	3	4
Larceny from person.....	1		1
Liquor to Indians.....	2	1	3
Jail breaking	2	1	3
Manslaughter	3	1	4
Murder, attempted	1	1	2
Perjury		1	1
Petty larceny	2	1	3
Rape	2		2
Receiving stolen property.....	1		1
Robbery	3	5	8
Robbery, attempted	3	4	7
Seduction	2		2
Sodomy	1		1
White slavery	1	1	2
Totals.....	323	196	513

Table No. 5.
SHOWING EDUCATION OF INMATES WHEN RECEIVED.

EDUCATION	Year Ending September 30, 1915	Year Ending September 30, 1916	Total
Illiterate	18	15	33
First grade (barely read)	7	6	13
Second grade (read and write)	19	9	28
Third grade	27	12	39
Fourth grade	40	19	59
Fifth grade	45	22	67
Sixth grade	44	18	62
Seventh grade	31	25	56
Eighth grade	56	35	91
One year high school	22	12	34
Two years high school	11	9	20
Attended college	2	3	5
Attended universities	4	.....	4
Totals	328	185	513

Table No. 6.
SHOWING HABITS OF INMATES BEFORE CONVICTION.

HABITS	Year Ending September 30, 1915	Year Ending September 30, 1916	Total
As to Intoxicants—			
Intemperate	190	110	300
Abstinent	124	63	187
No record	14	12	26
Totals	328	185	513
As to Tobacco—			
Users	261	173	434
Non-users	58	11	69
No record	9	1	10
Totals	328	185	513
As to Drugs—			
Addicted	14	7	21
Not addicted	286	175	461
No record	28	3	31
Totals	328	185	513
As to Cigarettes—			
Smokers	260	159	419
Non-smokers	63	23	86
No record	5	3	8
Totals	328	185	513

Table No. 7.
SHOWING OCCUPATION OF INMATES BEFORE CONVICTION.

OCCUPATION	Year Ending September 30, 1915	Year Ending September 30, 1916	Total
Actor	1		1
Accountant	1		1
Baker	4	5	9
Barber	5	4	9
Blacksmith	1	2	3
Bookkeeper	7	5	13
Brakeman	2	1	3
Butcher	4	3	7
Carpenter	5	6	11
Chauffer	10	9	19
Clerk	10	5	15
Cook	14	5	19
Dishwasher	7	4	11
Drug clerk	2	1	3
Electrician	2	2	4
Engineer	14	6	20
Errand boy	5	1	6
Farm hand	39	30	69
Fireman	8	3	11
Interpreter		1	1
Jockey	2		2
Laborer	70	37	107
Lather	3		3
Lumberman	16	9	24
Machinist	3	3	6
Machinist helper	5		5
Meterman	1		1
Miner	5	3	8
Movie operator	1		1
Musician	4	2	6
Newspaperman	1	1	2
None given	7	4	11
Painter	7	2	9
Photographer	2	1	3
Plumber	7	2	9
Policeman		1	1
Porter	2	1	3
Pressman	8	1	9
Sailor	9	1	10
Salesman	9	3	12
Sheriff, deputy	1		1
Sign writer	2		2
Stenographer	2	1	3
Structural iron worker	1	1	2
Student	2	4	6
Suit case worker		1	1
Teamster	12	10	22
Tailor	2	3	5
Walter	3	1	4
Totals	328	185	513

Table No. 8.
SHOWING RELIGIOUS BELIEF OF INMATES.

RELIGION	Year Ending September 30, 1915	Year Ending September 30, 1916	Total
Protestant	92	111	203
Catholic	80	45	134
Jewish	6	5	11
Greek orthodox	4	4	8
Mormon .....	.....	1	1
Atheist	4	2	6
None	33	17	50
Totals.....	328	185	513

Table No. 9.
NUMBER OF INMATES IN EACH GRADE.
PERIOD OCTOBER 1, 1914, TO SEPTEMBER 30, 1916.

MONTHS	GRADES			Total
	First	Second	Third	
October, 1914	238	149	19	406
November, 1914	214	131	20	365
December, 1914	219	119	18	356
January, 1915	230	129	16	375
February, 1915	233	131	17	381
March, 1915	233	130	18	395
April, 1915	241	145	20	406
May, 1915	229	131	18	378
June, 1915	237	140	17	397
July, 1915	265	158	19	437
August, 1915	254	151	17	422
September, 1915	261	160	16	437
October, 1915	255	152	17	424
November, 1915	250	149	17	416
December, 1915	270	155	19	444
January, 1916	255	149	17	422
February, 1916	248	138	16	402
March, 1916	230	130	15	375
April, 1916	222	128	16	366
May, 1916	217	121	16	354
June, 1916	209	114	17	340
July, 1916	201	110	16	327
August, 1916	199	112	15	326
September, 1916	180	110	15	305
Average.....	233	135	17	385

Table No. 10.
SHOWING NATIVITY OF INMATES.

UNITED STATES	Year Ending September 30, 1915	Year Ending September 30, 1916	Total
Alabama	1	.....	1
Arizona	1	1	2
Arkansas	1	1	2
California	4	4	8
Colorado	5	2	7
Connecticut	1	.....	1
Delaware	1	.....	1
District of Columbia	1	.....	1
Hawaii .....	.....	2	2
Idaho	1	.....	1
Illinois	15	9	24
Indiana	7	7	14
Iowa	12	7	19
Kansas	8	9	17
Kentucky	4	.....	4
Louisiana	4	.....	4
Maine	1	1	2
Maryland	1	.....	1
Massachusetts	3	.....	3
Michigan	8	6	14
Minnesota	22	8	30
Mississippi	9	9	18
Missouri	3	2	5
Montana	16	5	21
Nebraska	6	5	11
New Hampshire	1	.....	1
New Jersey	1	1	2
New Mexico	2	.....	2
New York	29	9	38
North Carolina	2	1	3
North Dakota	5	3	8
Ohio	12	5	17
Oklahoma	6	2	8
Oregon	14	9	23
Pennsylvania	9	5	14
Rhode Island	2	.....	2
South Dakota	3	2	5
Tennessee	2	2	4
Texas	4	2	6
Utah	1	1	2
Virginia	1	1	2
Washington	79	49	116
West Virginia	4	1	5
Wisconsin	10	12	22
Wyoming	1	.....	1
Philippines	5	2	7
Totals	328	185	513

Table No. 11.
SHOWING CIVIL CONDITION OF INMATES.

CIVIL CONDITION	Year Ending September 30, 1915	Year Ending September 30, 1916	Total
Married	59	89	98
Single	265	142	407
Divorced	3	4	7
Widowed	1	.....	1
Totals.....	328	185	513

Table No. 12.
SHOWING COLOR OF INMATES.

COLOR	Year Ending September 30, 1915	Year Ending September 30, 1916	Total
White	312	169	481
Negro	7	5	12
Indian	4	7	11
Japanese	1	1	2
Brown	4	3	7
Totals.....	328	185	513

Table No. 13.
SHOWING INDUSTRY OF INMATES.

INDUSTRY	Year Ending September 30, 1915	Year Ending September 30, 1916	Total
Had employment when arrested.....	104	76	180
Idle when arrested.....	217	99	316
No record	7	10	17
Totals.....	328	185	513

Table No. 14.
SHOWING INMATES PLEAS.

PLEAS	Year Ending September 30, 1915	Year Ending September 30, 1916	Total
Gilty	238	160	443
Not guilty	45	25	70
Totals.....	323	185	513

Table No. 15.
SHOWING DOMESTIC RELATIONS OF INMATES.

DOMESTIC RELATIONS	Year Ending September 30, 1915	Year Ending September 30, 1916	Total
Both parents living.....	163	94	257
Lost both parents.....	47	25	72
Lost father only.....	75	41	116
Lost mother only.....	43	25	68
Totals.....	328	185	513

Table No. 16.
SHOWING ARMY AND NAVY PRISONERS.

PRISONERS	Year Ending September 30, 1915	Year Ending September 30, 1916	Total
Army	7	3	10
Navy	6	5	11
Totals.....	13	8	21

Table No. 17.
MONTHS OF INMATES ARRIVAL.

(Returns not included.)

MONTHS	Year Ending September 30, 1915	Year Ending September 30, 1916	Total
October	23	19	42
November	25	17	42
December	25	24	49
January	26	20	46
February	29	10	39
March	33	22	60
April	33	15	48
May	20	10	30
June	29	14	43
July	31	15	46
August	21	10	31
September	23	9	32
Totals	323	185	513

Table No. 18.
SHOWING POPULATION OF INSTITUTION FOR EACH MONTH.

MONTHS	Year Ending September 30, 1915	Year Ending September 30, 1916	Total
October	456	456	456
November	399	435	834
December	393	424	820
January	400	444	844
February	414	449	863
March	415	415	830
April	445	440	885
May	469	359	828
June	442	355	800
July	469	364	833
August	454	356	810
September	428	361	789

Table No. 19.
TERMS OF SENTENCE OF INMATES.

SENTENCE	Year Ending September 30, 1915	Year Ending September 30, 1916	Total
Four years and costs.....		1	1
Indefinite.....	6	5	11
Six months.....	2		2
Six months to 1 year.....	4	1	5
Six months to 18 months.....	6		6
Six months to 2 years.....	3	5	8
Six months to 3 years.....		1	1
Six months to 5 years.....	4	3	7
Six months to 10 years.....	3		3
Six months to 15 years.....	22	13	35
Six months to 20 years.....	3	5	8
Eight months to 15 years.....	2		2
Nine months to 15 years.....	1		1
Nine months to 20 years.....	1		1
Ten months to 15 years.....		1	1
Eleven months to 15 years.....	1		1
One year flat.....	6	9	15
One year to 13 months.....	1		1
One year to 2 years.....	4	4	8
One year to 3 years.....	5	3	8
One year to 18 months.....	2	1	3
One year to 1 year and 1 day.....	1		1
One year to 5 years.....	16	1	17
One year to 7 years.....	1		1
One year to 7½ years.....	2		2
One year to 10 years.....	12	8	20
One year to 20 years.....	22	14	36
One year to 14 years.....	1		1
One year to 15 years.....	152	86	238
Eighteen months.....	2	3	5
Eighteen months to 5 years.....	2		2
Eighteen months to 10 years.....		1	1
Eighteen months to 15 years.....	1	2	3
Two years.....	1		1
Two years to 3 years.....	1		1
Two years to 5 years.....	1		1
Two years to 10 years.....	3	2	5
Two years to 15 years.....	16	3	19
Two years to 20 years.....	3		3
Two years to 7 years.....	1		1
Two years and a half to 7 years.....	1	1	2
Two years and a half to 10 years.....	1		1
Two years and a half to 15 years.....	2		2
Three years to 5 years.....	2		2
Three years to 6 years.....	2		2
Three years to 10 years.....	1		1
Three years to 15 years.....		6	6
Three years and a half to 15 years.....	1		1
Five years to 5½ years.....			
Five years to 7 years.....		1	1
Five years to 10 years.....	1	2	3
Five years to 15 years.....	2	1	3
Five years to 20 years.....		1	1
Totals.....	328	185	513

Table No. 20.
SHOWING NATIVITY OF PARENTS OF INMATES.

NATIVITY	Year Ending September 30, 1915	Year Ending September 30, 1916	Total
Parents Americans	142	60	202
Father American	18	19	37
Mother American	19	20	39
Parents foreign	82	37	119
Father foreign	17	10	27
Mother foreign	17	13	32
Parents unknown	21	10	31
Father unknown	7	10	17
Mother unknown	5	4	9
Totals	328	185	513

Table No. 21.

COUNTRY	Year Ending September 30, 1915		Year Ending September 30, 1916		Total	
	Father	Mother	Father	Mother	Father	Mother
United States	175	183	185	176	360	359
Austria	4	5	3	1	7	6
Argentina	1	1			1	1
Canada	13	12	17	12	30	24
Denmark	1	1	1		2	1
England	9	8	11	7	20	15
France	2	1	3	2	5	3
Finland	4	3	3	4	7	7
Germany	14	16	15	14	29	30
Greece	4	3	4	4	7	7
Holland	1	1	1	1	2	2
Hungary	1	1	1	1	2	2
Italy	6	5	5	6	11	12
Ireland	7	6	9	9	16	15
Japan	1	1	1	1	2	2
Norway	6	3	4	4	10	7
Mexico	1		2	2	3	2
Poland	1	1	2	1	3	2
Sweden	3	4	4	5	7	9
Switzerland	1				1	
Scotland	6	9	5	5	11	14
Spain	1	1	1	1	2	2
Russia	2	4	3	2	5	6
Portugal	1	1			1	1
Totals	265	270	280	237	545	527

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STATE OF WASHINGTON

REPORT

OF THE

State Inspector of Coal Mines

Biennial Period Ending December 31, 1916

JAMES BAGLEY, Inspector
SEATTLE

Seventeenth Biennial Publication

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LETTER OF TRANSMITTAL.

OFFICE OF THE STATE INSPECTOR OF COAL MINES.

To his Excellency Ernest Lister, Governor, State of Washington.

SIR: I have the honor to submit herewith my second biennial report as State Inspector of Coal Mines for the biennial period ending December 31, 1916, the same being the Seventeenth Biennial publication.

Respectfully submitted.

JAMES BAGLEY,

State Inspector of Coal Mines.

Seattle, Wash., January 1, 1917.

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INTRODUCTION AND REVIEW.

The coal production in the state for the past two years showed a marked decrease over the previous two-year period. This showing is principally due to the small production in 1915, which was 631,030 short tons less than in 1914, a decrease of 21 per cent over the previous year. The production for 1915 is the smallest of any year since 1899 and was due to the mild winter of 1914-1915, the general business depression in all industries throughout that year, and the increased consumption of fuel oil. The production for the state in 1916 is more encouraging; 3,019,600 short tons were mined, an increase of 610,269 short tons over 1915. The production for the biennial period 1915-16 was 5,428,931 short tons, against 6,872,008 short tons for the previous two years, a decrease of 1,443,077 short tons, or about 21 per cent decrease for the biennial period. The average value of coal at the mine per short ton was \$2.24 in 1915 and \$2.37 in 1916. The total value at mine in 1915 was \$5,393,524, and in 1916, \$7,155,317.

While the coal production for the past two years shows a marked decrease, the coke production at the mines of the state shows a small increase for both years, 182,417 short tons being produced for the two-year period, an increase of 28,112 short tons over the previous biennial period. Ninety-three thousand seven hundred twenty-two short tons were produced in 1916, this being the largest production for any one year in the history of the state. The average value of coke at the mine per short ton was \$5.32 in 1915, and \$5.20 in 1916. The total value at the mine for the two-year period was \$958,962. Reports received from the customs district of Washington show that about 50 per cent of the coke produced in the state is exported to British Columbia.

The total number of employees in the coal industry was 4,828 in 1915, and 4,746 in 1916, an average of 4,787 for the two years. The mines worked an average of 165 days in 1915, and 218 days in 1916.

While the two-year period from July, 1914, to July, 1916, was one of the worst in recent years for the coal industry of the state, the last half of 1916 shows a marked revival in the coal industry. Fuel oil, which is the greatest competitor of Washington coal, has steadily advanced in price until now it is more economical for the railroads and other large consumers of fuel to use coal instead of fuel oil. Present indications are that the coal industry will regain much of the business lost in recent years on account of the low price of fuel oil, and the mines that were temporarily closed during the depression in the coal industry in the past few years are again being reopened or are preparing to do so. The Northwestern Improvement Company is opening two new mines in the Roslyn-Cle Elum field and which

promise to be steady producers in the next few years. The same company is opening a mine two miles north of Kanaskat, on a branch of the Northern Pacific Railroad. The Independent Coal and Coke Company has taken over the mine formerly known as the Cle Elum shaft and has driven a rock slope 700 feet to the Roslyn seam. This mine promises to be a steady producer. The Cokedale mine, in Skagit county, which has been closed for a number of years, is being reopened under the management of F. A. Hill, a well known coal operator of this state. Take as a whole, the outlook for the future in the coal industry is bright, and all connected with the industry are very optimistic as to the future.

FATAL ACCIDENTS.

There were forty-five persons accidentally killed in and about the mines in 1915, and twenty-one during 1916, a total of sixty-six fatalities for the biennial period. The mine explosion at Ravensdale on November 16, 1915, was responsible for the death of thirty-one persons, a full report of the explosion being included in this report. The principal contributing causes outside of the Ravensdale explosion taken for the two-year period are: Falls of rock and coal, eleven; flying pieces from blasts, including miss-shots, four; electrocuted, four; run over by cars, locomotives, or runaway trips, three.

The initial cause of the Ravensdale explosion will never be known, but it was unquestionably propagated by means of coal dust. It is my belief that it started from either an overcharged shot or from an explosion of gas caused by some one of the men in the chutes igniting some gas. An inspection of the Ravensdale mine was made by this department about one month before the explosion. At that time it was noted that considerably more dust than usual was present in the new workings where most of the men were working at the time of the explosion. This condition was discussed with the mine foreman and superintendent at that time and preparations were made to take care of the condition. From the testimony at the inquest the chutes made more dust as they advanced, and although the officials were making efforts to take care of the dust, the precautions taken were not adequate to take care of the conditions at the time the explosion occurred. This is not said in any spirit of criticism of those in charge of the mine, for it is realized that the dusty conditions at the Ravensdale mine at the time of the explosion had come on in a few weeks and were something they did not have previous to that time. Batteries of chutes were worked out on both sides of the battery of chutes that were working at the time of explosion. When working these batteries no sprinkling had been done and no sprinkling had ever been done in the Ravensdale mine before turning the battery of chutes which was working at the time of the explosion, and no sprinkling had ever been done on the pitch until two days before the explosion. It was brought out at the inquest that on at least one occasion a fireboss had given

matches to one of the miners in the places where safety lamps were used to light a shot when he was not present. It is my impression that such conditions would not exist if mine officials were required to have certificates, and it is hoped that the time will soon come when certificates for mine officials will be one of the requirements of the mine law.

A table showing the number of tons mined to each fatal accident at each mine in the state for the period 1905-1916, inclusive, will be found included in this report. The best showing is made by the Roslyn Cascade Coal Company at Roslyn, said company having mined 615,520 short tons without a fatal accident. At the mines at which fatal accidents have occurred, the Roslyn Fuel Company's Beekman No. 2 mine has the best record, with 430,520 short tons per fatal accident. The Northwestern Improvement Company, Cle Elum mine, and the Pacific Coast Coal Company, Ford mine at New Castle, follow in order. The average tonnage for the state per life lost for the eleven-year period is 121,858 short tons. This is not a very good showing, and while it can be said that the operating conditions in Washington are not as favorable as in most coal producing states on account of the heavy pitches and complex mining conditions, after a careful study of the statistics and a knowledge of conditions, one factor in the operation of the mines is brought to my attention, namely, that where the inspection of the working faces is frequent less accidents occur. By the employment of shot-firers accidents caused by explosives will be less. Uniform systems of timbering should be adopted wherever possible and rigidly enforced. Occasions have come to the inspector's notice when a rule was established and violated. For the safety of all engaged in mining, discipline is necessary and the miners themselves should insist that the offender be punished.

NON-FATAL ACCIDENTS.

A total of 706 non-fatal accidents occurred in 1915, and 1,035 in 1916. This includes all accidents for which claims for compensation have been made to the Industrial Insurance Commission, and includes all accidents with a time loss of two and one-half days or more. A table showing in detail the number of tons mined to each man injured at each mine in the state, average time lost per man returned to work, and the number of employes to each man injured, is given in this report and will be of interest to those who wish to go into the study of mine accidents. Attention is also called to the table showing the percentage of non-fatal accidents by leading causes, a study of which will help any mine official by assisting him where to look for the principal cause of his accidents.

The average time loss of the injured returned to work in days was 26.05 per non-fatal accident in 1915, and 23.19 per non-fatal accident in 1916. Three thousand eight hundred sixty-one short tons were produced in 1915 to each injury, and 3,293 short tons in 1916. One man was injured to 4.6 men employed in 1916. These figures should bring

home to the mine operator the necessity of a more frequent inspection of the working faces, where most of the accidents happen.

LABOR CONDITIONS.

A new agreement was entered into between the Washington Coal Operators' Association and District No. 10, United Mine Workers of America, for the two-year period extending from September 1, 1916, to August 31, 1918. Contracts were signed with most of the independent companies for the same period. At the present time over 90 per cent of the miners of the state are affiliated with the mine workers' organization and come under their industrial contract. An increase over the old scale was granted of 3 cents per ton and 3 per cent on all yardage and dead work. An increase of 5 per cent was granted those working by the day. Those receiving the lowest wages were given the benefit of this raise over the higher paid workers.

STRIKES.

The Grand Ridge mine at Issaquah, which was closed in November, 1914, when the company refused to sign an agreement with the mine workers' organization, was reopened in April, 1916, by the Andrew Kennedy Company, which signed an agreement with the miners' organization.

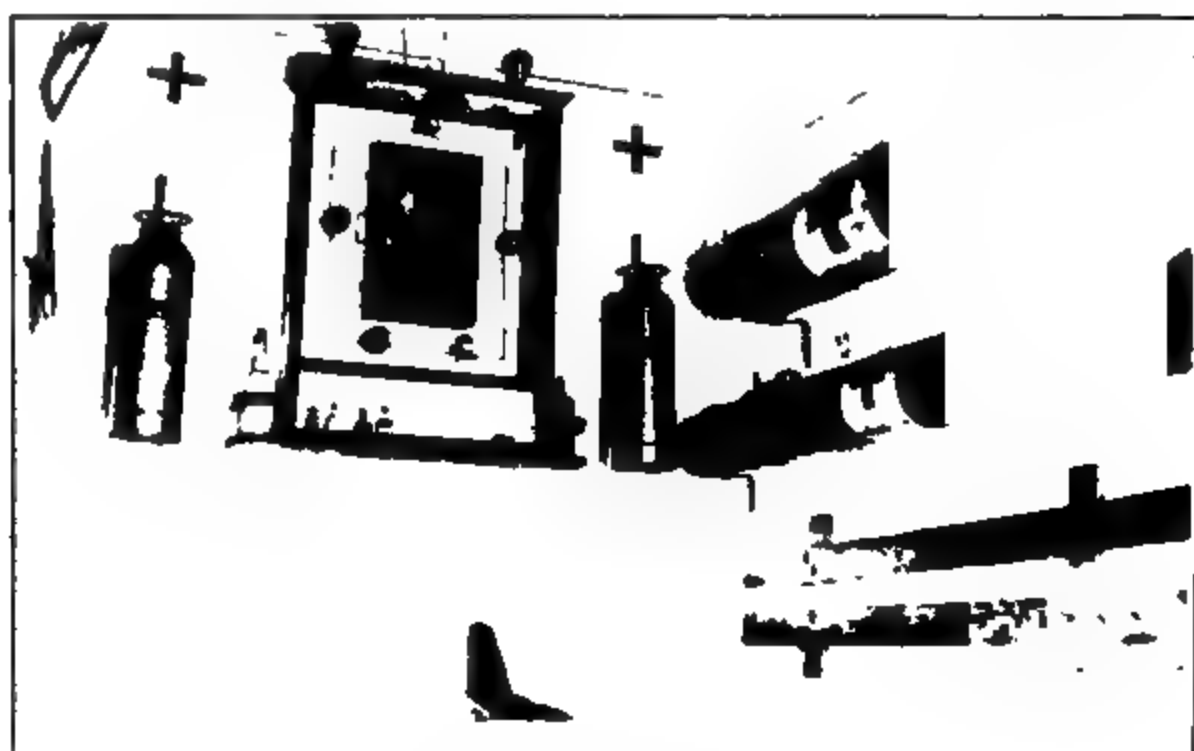
The Durham mine was shut down in March, 1916, when a demand was made for recognition of the mine workers' organization. An agreement was reached and the mine resumed operation after a shut-down which lasted three weeks.

The No. 5 mine at Roslyn was idle three weeks in June, 1916, on account of a controversy between the miners and the mine foreman. The mine foreman was dismissed and the miners fined one dollar each for stopping work in violation of their agreement. The money collected was turned over to the committee in charge of the Mine Rescue and First Aid Meet to be used in conducting the meet.

MINE RESCUE AND FIRST AID TRAINING.

Two hundred ninety-four men have been trained in mine rescue and first aid at the Seattle station maintained by the Bureau of Mines for that purpose during the past two years.

The annual Mine Rescue and First Aid meet was held at Cle Elum in July, 1915. The team from No. 6 mine, Northwestern Improvement Company, won first prize in the mine rescue contest; the team from No. 7 mine of the same company won first prize in the first aid contest. The 1916 meet was held August 19, at the Tacoma Stadium, twenty-two teams from the different camps participating. The team representing the Roslyn Fuel Company won first prize in the mine rescue contest, and a team representing No. 7 mine, Northwestern Improvement Company, won the first prize in the first aid contest. These state meets are held annually and much enthusiasm is shown by the different teams in this work. The miners' organization works in harmony with the mining companies in encouraging this work.



First Aid Stations, No. 5 and No. 7 Mines, Northwestern Improvement Co.,
Roslyn-Cle Elum Mines.

Teams representing the Pacific Coast Coal Company, Carbon Hill Coal Company, and the Roslyn Fuel Company were sent to the Panama-Pacific International Exposition to participate in the national contest held in September, 1915. All of the teams made a good showing. The Roslyn Fuel Company's team took second place in the mine rescue contest, competing with teams from all sections of the United States.

A new mine rescue truck was added to the equipment at the Seattle station in the past year which will add much to the efficiency of the station in answering calls that may be made and in training work at the mines.

MINING LAWS.

No progress was made during the session of the legislature in 1915 in having any new mining legislation enacted. It is conceded by all who are engaged in the coal mining industry that the present laws regulating the operation of coal mines are inadequate and that new legislation is very badly needed. Realizing that no progress could be made with new legislation if the coal operators and miners were not brought together on this matter, it was suggested by the mine inspector that a committee of operators and miners be selected to work with the mine inspector in drafting a new mining code. While no action was taken along the lines suggested, a prepared code was submitted by the mine inspector to both parties for their consideration. After meeting both parties several times and eliminating some of the objectionable features, the code was finally accepted by both the miners and operators, who agreed to support it. It will be submitted to the legislature, and I hope it will be given favorable consideration. The main features of the proposed law are: That a board of examiners be appointed by the Governor to pass on the qualifications of candidates for the position of mine inspector; definition of the duties of mine inspectors; this board of examiners with the addition of the mine inspector to pass on the qualifications of candidates for the positions of mine foremen, assistant mine foremen and firebosses, and grant certificates to all whom they find qualified as prescribed in the law; defining the duties of operators and mine officials and providing penalties for the violation of same; regulations for the installation and use of electricity in mines; prescribing regulations to be observed in dusty mines and in mines worked with safety lamps. A standard set of mine rules and penalties for the violation of same and covering the duties of all employees is provided in the new code. If the proposed code is enacted into law and its provisions complied with it will make conditions much safer in the coal mines of this state and should cut down accidents materially.

STATISTICS.

The unit of weight used in this report is the avoirdupois short ton (2,000 pounds) and is used throughout and is meant when the

word ton is used, with the exception of the data on imports and exports as reported by the collector of customs, port warden of Seattle, and harbor master of Tacoma, when the long ton (2,240 pounds) is used. The total tonnages given as the quantity of coal produced or total outputs at the individual mines represents only the usable fuel. Refuse, slate and bone brought out of the mine or picked or sorted from the coal in the tipples and refuse from washeries and dry cleaning plants are not considered as part of the quantity of coal produced. The total value of the coal is the sum of all the values reported by the individual operators, and the average value for the county or state as the case may be is the total divided by the total tons.

NEW MINES OR OLD MINES REOPENED DURING THE YEAR 1915.

After being abandoned for over twenty years, the Durham mine No. 2 was reopened by the Durham Colliery Company and is again numbered among the producing mines.

Eureka mine, located near Cumberland, King county, was reopened and operated for a few months by the Cassidy Coal Company.

The Wright mine, above Roslyn, was operated for a few months in this year.

The following mines were not operated this year and are permanently abandoned or temporarily closed:

Grand Ridge mine, Central Coal Company, temporarily closed.

Hyde mine, Hyde Coal Company, temporarily closed until drainage tunnel is driven from Green river.

Mine "B," Pacific Coast Coal Company, closed until market conditions improve.

The Lincoln mine, Lincoln Coal Company, and Kopliah mine, Lewis County Light and Power Company, closed.

Pittsburg (No. 8) slope, American Coal Company, was permanently abandoned and all material removed.

The following companies have changed names:

Washington Coal & Mining Company to Empress Coal Company.

Montezuma Coal Company to Washington Manganese, Coal and Copper Company.

NEW MINES, OLD MINES REOPENED, MINES ABANDONED, TEMPORARILY CLOSED OR NOT HEARD FROM SINCE LAST REPORT, 1916.

Grand Ridge mine, reopened; No. 1 mine, Durham, reopened; Hyde mine, Cumberland, reopened; Carbon Coal and Clay Company operated new Daly slope; National Coal Company drove new slope; Independent Coal & Coke Company, Cle Elum, is developing new mine; Freeburn Coal Company, Packwood, has a new slope, but does

not come under inspection; Salzer Valley mine heard from, but does not come under inspection.

Black River Coal Company not heard from; Eureka mine was closed; No. 14 mine, Black Diamond, closed after working nine days of this year; Dip mine, Northwestern Improvement Company, Roslyn, was closed; Melmont mine, of the same company, closed; Ravensdale mine closed after the explosion. Have not heard from the Chehalis Coal Company, Bucoda Coal Company, and the Washington Anthracite Coal Company, all of which do not come under inspection.

The following companies have changed names:

Scranton Coal Company to Ozark Coal Company.

Central Coal Company to Andrew Kennedy.

Empress Coal Company to Centralia Coal Mining Company.

American Coal Company to South Willis Coal Company.

Issaquah and Superior Coal Mining Company to the King Coal Company.

CONCLUSION.

In conclusion I wish to thank both the mine officials and miners for their cooperation and good will toward this department during the past four years.

Acknowledgment is also made to the Industrial Insurance Commission for data furnished in regard to accidents; to Mr. S. H. Ash for his loyal service as deputy inspector and assistance in compiling the statistics for this report. Acknowledgment is made to Professor Henry Landes, state geologist, for the use of some of the plates used in this report.

SUMMARY.

The Following Summary for the Years Ending December 31, 1914, and 1915, is Here Presented.

SUMMARY	1914	1915
Number of mines and openings of all kinds.....	58	58
Total production of coal (short tons).....	3,040,361	2,400,331
Total value of coal at mine.....	\$7,142,084	\$5,395,524
Average value of coal at mine, per ton.....	\$2.35	\$2.24
Total production of coke (short tons).....	78,573	88,695
Total value of coke at mine.....	\$404,126	\$471,732
Average value of coke at mine, per ton.....	\$5.15	\$5.32
Total number of inside employees.....	4,383	3,683
Total number of outside employees.....	1,264	1,145
Total number of employees.....	5,647	4,828
Average number of days operated.....	* 200	* 165
Yearly production per employe (short tons).....	555	498
Daily average short tons per employe.....	2.69	3.01
Total number of men accidentally killed.....	17	† 45
Total number of non-fatal accidents.....	831	705
Total number of widows.....	9	28
Total number of orphans.....	26	59
Number of tons mined to each life lost.....	178,845	58,540
Number of tons mined per non-fatal accident.....	3,659	3,413
Number of lives lost per 1,000 employes.....	3.01	9.36

* Found by dividing the sum of the products of the total number of men employed and days worked at each mine by the total number of men employed.

† Three killed outside.

PRODUCTION OF COAL BY COUNTIES.

COUNTY	1914	1915
King	1,042,607	844,985
Kittitas	1,227,564	879,092
Lewis	87,558	78,529
Pierce	558,841	488,695
Thurston	112,189	112,038
Whatcom	6,602	6,555

PRODUCTION OF COKE BY COUNTIES.

COUNTY	1914	1915
Pierce	78,573	88,695

NAME OF COMPANY	No. of Mines	Name of Mine	Town	County	Tons of Coal Shipped	Sold to Employers and Local Trade	Used for Power	Charged Into Coke Ovens	Total Coal Production	Total Coke Production (a)	In side Em. employes	Out-side Em. employes	Killed	Wid-ows	Or-ph'ns
Black River Coal Company (f).	1	Black River...	Renton...	King...	265	302	5,670	...	265	...	66	19	(g) 1	1	...
Carbon Coal and Clay Co.	1	Bayne... (Carbon)	Bayne...	King...	44,425	...	...	...	50,397	...	...	...	...	...	...
Cassidy Coal Company (b).	1	Eureka...	Cumberland...	King...	4,500	...	...	...	4,500	...	...	...	...	...	...
Denny-Renton Clay & Coal Co.	2	Nos. 1 & 2...	Taylor...	King...	7,167	200	18,973	...	21,330	130	26	6	...	...	...
Denny-Renton Clay & Coal Co.	1	Denny-Renton	Renton...	King...	...	9,322	...	...	9,322	277	13	1	...	...	...
Durham Colliery Company...	1	No. 2 Durham	Durham...	King...	18,349	63	...	...	18,854	221	25	13	...	...	...
Hyde Coal Company (c).	1	Hyde...	Cumberland...	King...	...	...	...	...	...	...	...	...	...	...	...
Isaquaah & Superior Coal Mining Company	1	Isaquaah...	Isaquaah...	King...	39,810	461	...	...	40,271	61	129	45	1	...	...
National Coal Company	1	Russet...	Cumberland...	King...	7,845	146	1,335	...	9,326	231	17	19	...	...	...
Northwestern Improvement Co.	1	Ravensdale...	Ravensdale...	King...	109,032	967	14,308	...	124,347	206	89	65	32	20	37
Pacific Coast Coal Company	1	No. 14...	Blk Diamond	King...	44,494	28	...	...	44,522	1034	106	42	...	...	...
Pacific Coast Coal Company	1	No. 11...	Blk Diamond	King...	128,051	1,965	3,640	...	139,095	146	326	93	...	...	...
Pacific Coast Coal Company	1	Cannon...	Franklin...	King...	3,582	177	1,437	...	5,195	194	93	45	...	...	...
Pacific Coast Coal Company	1	Ford...	New Oastle...	King...	227,114	917	10,812	...	239,845	1854	162	137	...	...	...
Puget Sound Traction, Light & Power Company	1	Renton...	Renton...	King...	107,317	8,411	10,220	...	120,948	245	174	43	1	...	...
Pocahontas Coal and Coke Co.	1	Pocahontas...	Palmer...	King...	20,604	130	1,297	...	22,021	288	25	19	...	...	...
Seranton Coal Company	1	Navy...	Cumberland...	King...	1,050	20	28	...	1,069	14	34	12	...	...	...
Totals...	18	...	...	...	763,005	18,000	62,002	...	844,966	2,3334	1,206	564	35	21	41
Northwestern Improvement Co.	2	No. 6 & Dept.	Roslyn...	Kittitas...	122,315	6,239	11,303	...	140,437	124	237	37	...	...	...
Northwestern Improvement Co.	1	Number 3...	Ronald...	Kittitas...	149,972	563	5,085	...	155,570	117	267	15	3	3	7
Northwestern Improvement Co.	1	Number 5...	Roslyn...	Kittitas...	82,920	120	3,714	...	86,703	120	143	14	...	...	...
Northwestern Improvement Co.	1	Number 7...	Cle Elum...	Kittitas...	100,024	991	4,678	...	114,693	117	189	13	...	...	...
Northwestern Improvement Co.	1	Cle Elum...	Cle Elum...	Kittitas...	85,834	2,031	128	...	89,012	119	177	16	...	...	...
Roslyn Cascade Coal Company	2	Nos. 1 & 2...	Ronald...	Kittitas...	69,404	1,002	1,142	...	71,638	151	94	11	...	...	...
Roslyn Coal and Coke Co.	1	Plant...	Lakedale...	Kittitas...	7,130	...	143	...	7,323	180	13	5	...	...	...
Roslyn Fuel Company	1	Beekman No. 1	Beekman...	Kittitas...	128,852	916	6,619	...	139,387	164	136	20	...	...	...
Roslyn Fuel Company	1	Beekman No. 2	Beekman...	Kittitas...	60,680	264	621	...	61,515	149	70	8	...	...	...
Roslyn Fuel Company	1	Summit...	Cle Elum...	Kittitas...	13,103	1,979	354	...	15,041	97	44	11	...	...	...
T. B. Wright & Sons	1	Number 1...	Lakedale...	Kittitas...	308	50	20	...	663	22	7	2	...	...	...
Totals...	13	...	...	...	830,351	13,354	24,357	...	979,032	1,300	1,332	152	3	3	7

* Tonnage in short tons. (a) Day of eight hours. (b) All data given that could be obtained. (c) Driving rock tunnel. (f) Less than ten men employed and no other data obtainable. (g) Killed outside. † Dtp operated two months.

Coal Mining Statistics for the Year 1915*—Concluded.

NAME OF COMPANY	No. of Mines	Name of Mine	Town	County	Tons of Coal Shipped	Sold to Employes and Local Trade	Used for Power	Charged into Coke Ovens	Total Coal Production	Total Coke Production	Days Operated (a)	In Em-ployes	Out-side Em-ployes	Killed	Wid-ows	Or-phans
Chehalis Coal Company (f).....	1	Leonard's.....	Chehalis.....	Lewis.....	3,333.....	2,000.....	143.....	.....	2,000.....	.....	311.....	5.....	1.....	.....	.....	.....
East Creek Coal Company.....	1	Number 3.....	Leddi.....	Lewis.....	4,544.....	.....	800.....	.....	3,476.....	.....	88.....	12.....	4.....	.....	.....	.....
Empress Coal Company (d).....	1	Empress.....	Centralla.....	Lewis.....	3,043.....	724.....	910.....	.....	5,144.....	.....	122.....	6.....	2.....	.....	.....	.....
Ford's Prairie Coal Company.....	1	Number 1.....	Centralla.....	Lewis.....	36,634.....	283.....	1,904.....	.....	4,877.....	.....	110.....	50.....	10.....	.....	.....	.....
Mendota Coal and Coke Co.....	1	Number 1.....	Mendota.....	Lewis.....	4,877.....	30.....	53.....	.....	38,774.....	.....	90.....	8.....	3.....	.....	.....	.....
Monarch Coal Company.....	1	Number 1.....	Koplah.....	Lewis.....	1,303.....	.....	.....	.....	4,860.....	.....	105.....	6.....	3.....	.....	.....	.....
Pennsylvania Coal Company.....	1	Number 1.....	Divide.....	Lewis.....	3,905.....	5,227.....	404.....	.....	1,303.....	.....	287.....	7.....	2.....	.....	.....	.....
Sheldon Coal Company.....	1	Sheldon.....	Chehalis.....	Lewis.....	3,905.....	5,227.....	404.....	.....	9,417.....	.....	217.....	11.....	3.....	.....	.....	.....
Superior Coal Company.....	1	Number 2.....	Chehalis.....	Lewis.....	4,959.....	3,009.....	460.....	.....	8,518.....	.....	1,325.....	105.....	28.....	.....	.....	.....
Totals.....	9				62,439	11,303	4,464	.....	78,259	.....	.....	41	21	.....	.....	.....
American Coal Company.....	1	Number 10.....	Spiketon.....	Pierce.....	15,068.....	91.....	2,564.....	.....	17,743.....	.....	111.....	279.....	125.....	(b) 4	3	7
Carbon Hill Coal Company.....	6	Carbonado.....	Carbonado.....	Pierce.....	157,598.....	1,718.....	8,109.....	31,984.....	199,469.....	19,178.....	258.....	145.....	47.....	11.....	.....	.....
Gale Creek Coal Mines Co.....	1	Gale Creek.....	Wilkeson.....	Pierce.....	19,159.....	197.....	230.....	.....	19,385.....	.....	96.....	41.....	15.....	.....	.....	.....
Northwestern Improvement Co.....	1	Melmont.....	Burnett.....	Pierce.....	16,747.....	3.....	1,068.....	.....	18,446.....	.....	197.....	199.....	57.....	1.....	.....	.....
Pacific Coast Coal Company.....	1	Burnett.....	Burnett.....	Pierce.....	79,677.....	984.....	3,850.....	.....	84,461.....	.....	179.....	79.....	4.....	.....	.....	.....
South Willis Coal Company.....	1	Champion.....	Wilkeson.....	Pierce.....	947.....	80.....	159.....	24,076.....	1,185.....	16,585.....	311.....	43.....	28.....	.....	.....	.....
The Fairfax Mine Incorporated.....	1	Fairfax.....	Fairfax.....	Pierce.....	6,010.....	15.....	.....	10,730.....	16,745.....	6,707.....	327.....	41.....	35.....	.....	.....	.....
Washington Manganese Coal & Copper Company (e).....	1	Marcy.....	Fairfax.....	Pierce.....	32,384.....	511.....	3,560.....	73,970.....	110,425.....	46,225.....	285.....	113.....	73.....	(g) 1	.....	.....
Wilkeson Coal and Coke Co.....	1	Wilkeson.....	Wilkeson.....	Pierce.....	327,009.....	3,620.....	30,227.....	1140,750.....	488,068.....	58,065.....	1,809.....	813.....	365.....	6	3	7
Totals.....	14				.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bucoda Coal Company (b).....	1	Bucoda.....	Bucoda.....	Thurston.....	107,776.....	578.....	3,742.....	.....	112,006.....	.....	187.....	73.....	32.....	1	1	4
Washington Union Coal Co.....	1	Tono-No. 1.....	Tono.....	Thurston.....	107,776.....	578.....	3,742.....	.....	112,006.....	.....	187.....	73.....	32.....	1	1	4
Totals.....	2				.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Washington Anthracite Coal Company (f).....	1	Glacier.....	Glacier.....	Whatcom.....	6,255.....	.....	.....	.....	6,255.....	.....	222.....	16.....	3.....	.....	.....	.....
Whatcom County Coal Co.....	1	Blue Oanyon.....	Parke.....	Whatcom.....	6,255.....	.....	.....	.....	6,255.....	.....	222.....	16.....	3.....	.....	.....	.....
Totals.....	2				.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand Totals.....	59				2,062,986	49,097	125,428	7140,750	2,409,851	58,065	7,211	3,683	1,145	(f) 45	32	59

* Tonnage in short tons. (a) Day of eight hours. (b) All data given that could be obtained. (c) Formerly Washington Coal & Mining Company. (d) Formerly Washington Coal & Mining Company. (e) Formerly Montezuma Coal Mines Company. (f) Less than ten men employed and no other data obtainable. (g) Killed outside. (h) One killed outside. (i) Three killed outside of mine. 13,513 tons purchased.

Table Showing Number of Days Operated; Total Number of Employees Per Mine; Short Tons Per Mine Per Year; Average Short Tons Per Mine Per Day; Average Short Tons Per Employee Per Year; Average Short Tons Per Employee Per Day, at Each Mine, 1915.

NAME OF COMPANY		County	Average Days Operated	Total Number of Employees Per Mine*	Short Tons Per Mine Per Year	Average Short Tons Per Mine Per Day	Average Short Tons Per Employee Per Year	Average Short Tons Per Employee Per Day
Black River Coal Company—Black River (e)		King	206	85	345	246	546	2.89
Carbon O		King		85	50,397			
Cassidy C		King		85	4,500			
Denny-Rer		King	180	35	21,980	164	363	4.35
Durham C		King	277	14	9,822	35	702	2.53
Issaquah		King	221	45	18,854	85	436	1.98
National		King	61	174	40,271	600	281	3.79
Northwest		King	231	38	9,398	40	289	1.12
Pacific Co		King	206	188	124,347	604	813	3.95
Pacific Co		King	1004	145	44,512	407	301	2.75
Pacific Co		King	146	419	183,685	946	319	2.19
Pacific Co		King	194	145	5,195	206	36	1.86
Pacific Co		King	1854	209	288,343	1,265	797	4.80
Puget Sound		King	245	317	190,948	494	657	2.27
Peachmont		King	228	44	22,021	78	500	1.74
Scranion		King	14	46	1,088	78	24	1.70
The County.....			† 155	1,859	844,968	387	452	2.91
Northwestern Improvement Company—No. 6 and Dip (b)		Kittitas	124	274	140,487	1,133	513	4.13
Northwestern Improvement Company—Mine No 3		Kittitas	117	282	155,570	1,330	532	4.72
Northwest		Kittitas	120	102	88,708	723	536	4.46
Northwest		Kittitas	117	202	114,838	980	508	4.85
Northwest		Kittitas	119	196	99,012	746	461	3.68
Roslyn (a)		Kittitas	151	105	71,638	474	682	4.82
Roslyn (b)		Kittitas	180	16	7,823	41	407	2.36
Roslyn (c)		Kittitas	164	136	136,397	832	574	5.33
Roslyn (d)		Kittitas	149	78	61,515	413	789	5.29
Roslyn (e)		Kittitas	97	85	15,041	165	273	2.82
T. B. Wright		Kittitas	22	9	608	30	74	8.35
The County.....			† 127	1,884	879,002	577	573	4.51

* Does not include office workers. † Found by dividing the sum of the products of the total number of men employed and days worked at each mine by the total number of men employed. (a) All mines. (b) Dip operated two months. (c) None given, less than ten men employed.

Table Showing Number of Days Operated; Total Number of Employees Per Mine; Short Tons Per Mine Per Year; Average Short Tons Per Mine Per Day; Average Short Tons Per Employee Per Year; Average Short Tons Per Employee Per Day, at Each Mine, 1915.—Concluded.

NAME OF COMPANY	County	Average Days Operated	Total Number of Employees Per Mine*	Short Tons Per Mine Per Year	Average Short Tons Per Mine Per Day	Average Short Tons Per Employee Per Year	Average Short Tons Per Employee Per Day
Chehalis Coal Company (e)	Lewis	311	6	2,000	11	579	1.86
East Creek Coal Company—Ladd Mine	Lewis	83	16	3,476	62	822	2.87
Empress Coal Company (e)	Lewis	122	8	5,144	38	585	4.79
Forde Prairie Coal Company	Lewis	110	60	4,877	353	646	5.97
Mendota Coal and Coke Company	Lewis	90	11	38,774	55	450	5.00
Monarch Coal Company	Lewis	105	9	4,900	12	145	1.88
Pennsylvania Coal Company	Lewis	287	9	1,308	38	1,046	3.65
Sheldon Coal Company	Lewis	217	14	9,417	38	608	2.80
Superior Coal Company	Lewis	138	138	8,513	69	573	4.16
The County		† 138		78,359			
American Oil	Pierce	111	62	17,743	159	286	2.53
Carbon Hill	Pierce	258	404	109,469	778	494	1.91
Gale Creek O	Pierce	145	59	19,585	135	383	2.83
Northwestern	Pierce	98	56	18,446	192	329	3.43
Pacific Coast	Pierce	197	265	84,461	429	330	1.67
South Wills	Pierce	79	7	1,155	15	169	2.14
The Fairfax Mine Incorporated	Pierce	311	74	20,084	66	279	0.90
Washington Manganese, Coal and Copper Company (d)	Pierce	327	76	15,745	51	220	0.67
Wilkeson Coal and Coke Company	Pierce	285	186	110,425	397	394	2.08
The County		† 235	1,179	488,008	149	415	1.77
Washington Union Coal Company—Tono Mine	Thurston	187	104	112,008	714	1,078	6.86
Bucoda Coal Company (e)	Thurston						
The County		† 187	104	112,000	714	1,078	6.86
Whatcom County Coal Company—Blue Canyon Mine	Whatcom	222	19	6,266	28	329	1.43
Washington Anthracite Coal Company (e)	Whatcom						
The County		† 222	19	6,255	28	329	1.43
The State		† 103	4,823	2,429,381	391	408	2.61

* Does not include office workers. † Found by dividing the sum of the products of the total number of men employed and days worked at each mine by the total number of men employed. (a) All mines. (b) Formerly Washington Coal and Mining Company. (c) Formerly Monte-cuma Coal Mines Company. (d) None given. (e) Less than ten men employed.

**DETAILED SYNOPSIS OF FATAL ACCIDENTS OCCURRING IN
THE STATE OF WASHINGTON FOR THE YEAR 1915.**

January 11—Puget Sound Traction, Light and Power Company, Renton: Pete Draskovich, Montenegrin, age 20 years, single, occupation timberman helper. Killed in the Renton mine on the morning of January 11, 1915. The deceased was employed as a timberman helper and was working on the 11 o'clock shift with Mike Bilovich, retimbering the Ninth South gangway. The custom at the Renton mine is for the timbermen to work in pairs, but on this particular night the foreman had sent an extra man along. Bilovich and the extra man were working together, and Bilovich, who was the leader of the gang, sent the deceased out about fifty feet from where he was working to remove some dirt from behind a leg on the low side of the gangway so they could replace the leg with a new one. The electric feed line, which carried 550 volts and runs the electric hoists on this level, is carried on the low side of the gangway and is fastened to the leg of the gangway sets from twelve to eighteen inches below the collar. Just before the accident happened the deceased came up to where the other men were working and borrowed the steel bar they were using, and went back to the place where he was working. About two or three minutes later his partners saw a flash out where the deceased was working, and they ran out to see what happened. The feed wire was broken and lying on the ground and the deceased was lying across it. One of his partners tried to pull him off the wire, but as the track at this point was covered with water he got a shock as soon as he touched him. The other man ran out of the gangway to a switch about 300 feet from the point where the accident occurred and cut off the current. He came back and tried to resuscitate the deceased, who was probably dead before the current had been cut off. The exact position of the deceased could not be determined when the accident happened, but judging from the position he was in when found he must have been between the wire and the rib, and while using the steel bar he received a shock and fell, carrying the wire with him. When found he had the bar tightly gripped in his hands.

At the hearing held to inquire into the cause of the accident the following was brought out: The only experience of the deceased as a miner was in the Renton mine, where he had worked for three or four months about a year previous to this accident. He had been away from the Renton mine until a few days before the accident, when he was employed on this work. He was unable to speak any English and evidently did not know the danger of coming in contact with the live feed wire. His partner, who was one of his countrymen, testified that he had repeatedly warned the deceased of the danger from the feed line, but the deceased did not seem to realize the danger.

The conclusion to be drawn from this accident is that inexperienced men, such as the deceased, should not be employed around live wires, and that wherever possible the current should be cut off when men are

employed in making repairs where they are liable to come in contact with the wires.

March 5—Carbon Hill Coal Company, Carbonado: Andrew Leiskar, Norwegian, age 39 years, married, occupation hoisting engineer, was fatally injured on March 5 at No. 6 mine of the Carbon Hill Coal Company, at Carbonado.

No. 6 slope had been operated with a steam hoist until about one week prior to this accident. At that time the change was made from the steam hoist to an electric hoist. The hoist was equipped with two brakes, one on the drum, and one on the shaft, and the brake power when tried out after it was installed was considered safe to handle the work required on this slope. In addition to the two brakes, the motors were so arranged that by throwing a switch they generated and would hold the trip without the brakes.

On the morning of the accident, a loaded trip was being hoisted, and when near the top of the slope it stopped and started back, slowly at first, when the engineer seemed to lose control, and the trip ran back, gaining speed as it went. It gained such speed that the heavy casting placed on the shaft, and on which the brake band worked, flew into pieces, some of which were thrown through the roof of the building and 150 feet from the engine house. Some of the flying pieces struck the engineer, injuring him fatally. He died the next day in the Tacoma Hospital.

The cause for this accident cannot be given, as the deceased was unconscious from the time of the accident until he died. On my investigation of the accident, the master mechanic and electrician both testified that every safeguard had been placed on the hoist to make it safe, and they could see no reason why the engineer lost control of the trip. The deceased leaves a widow.

March 31—Pacific Coast Coal Company, Burnett: Pete Smellsnick, Austrian, age 27 years, single, occupation miner. Killed on March 31, 1915, in North No. 3, gangway No. 20 chute, Burnett mine, operated by the Pacific Coast Coal Company, at Burnett.

Smellsnick was working as a miner, driving a chute to split a pillar. The chute was driven about ten feet wide, and timbered with stringers about five feet apart, which held about two feet of dirt that was between the coal and the main top. Three posts were set under the stringer, one at each end and one in the center. At the place where the accident occurred, the dirt between the coal and the main top had come down, leaving a space about two feet above the timber for three or four sets back from the face. The bucker in this place, who was the only witness to the accident, testified that Smellsnick was nailing a brace near the last set when he heard a crash and the last four sets collapsed without warning, catching Smellsnick and killing him instantly. It is supposed that the dirt held by the last two sets gave way, discharging the last four sets without warning or before Smellsnick had time to escape.

The recommendation of the inspector after an investigation of this accident was that whenever in this work it was not possible to secure the timber by wedging it against the top, that it be secured by braces between the sets on both ends of the stringers, the braces to also catch the top of the legs. The space above the sets should also be secured by filling in with timber.

June 7—Carbon Coal and Clay Company, Bayne: Valmer Strelec, Austrian, age 38, married, occupation outside laborer, was killed by falling from a chute on the outside of the Carbon mine on June 7, 1916.

The coal from the first level of the Carbon mine is dumped into a chute about 400 feet long, which extends to the bunker level, where it is again loaded and taken to the washer. This chute was filled on the last day the mine worked, June 3, and on the morning of the accident Strelec, with three or four others, was working near the lower end of the chute starting the coal, so it could be loaded and taken to the washer.

The last seen of Strelec alive, he was sitting on the side of the chute, and it is supposed that he lost his balance and fell to the ground twenty feet below. He was missed shortly after, and found under the chute with his neck broken. He evidently struck the ground head first, and was killed instantly.

This fatality was purely accidental. The deceased leaves a wife and four children.

June 18—M. Fernandez, Spanish, age 33 years, single, occupation miner, was electrocuted by coming in contact with the trolley wire, while working on gangway stumps in No. 3 seam, second level, Ravensdale mine.

Fernandez and his partner were working on the gangway stumps in No. 3 seam. The end of the trolley wire came to within a few feet of the chute Fernandez was working in. He had a car under the chute, the outside end of which extended under the end of the wire. He had ignited a shot in his chute and was climbing over the end of the car on his way to the gangway, when in some way he came in contact with the wire. His partners secured assistance as soon as possible, the superintendent and mine foreman, with others, reaching the place about ten minutes after it happened. Every means was used to resuscitate him without the desired result, those present working on him for an hour or more, or until the doctor pronounced him dead.

At this mine, the voltage carried is 550 to 575 D. C. The inspector recommended that in all places in this mine where there is any danger of coming in contact with the wires that they be guarded by placing a 1x6 strip on each side of the wire, also a strip on top in front of the chutes. This recommendation was adopted by the officials at this mine, and the state inspection department will insist upon carrying this out throughout the state in mines where conditions will permit it, and where the voltage is over 250.

July 29—Northwestern Improvement, No. 3 mine, Roslyn: Andrew Majetich, Austrian, age 42 years, married, occupation miner; Mike Wichevich, Austrian, age 54 years, married, occupation miner; Joseph Gavalo, Austrian, age 51 years, married, occupation miner, were killed about 7 a. m. July 29, in No. 49 pillar, third east entry, No. 3 mine.

The deceased were working as miners in No. 49 pillar on the third level east, and Majetich and Gavalo had drawn the pillar down about 500 feet from the top of the room. On the morning of the accident the fireboss noticed that the roof was working and a small cave had occurred. He called the miners' and foreman's attention to condition of pillar, and the deceased were informed that men would be sent in to give them assistance in timbering the place to make it safe to work in. The deceased started for their working place about 6:30 a. m. and had either started to timber or a bump came and loosened the rock, causing same to fall and catch the three men. They were dead when men went to their assistance. The company men who were to assist them followed the deceased about fifteen minutes after they started and had not reached the room before the accident occurred. The mine starts to operate at 7 a. m.

The only way such accidents can be avoided is for more caution to be exercised on the part of the miners themselves, for in this instance no one should, and it was thought could, be better qualified to timber the place than the miners working in the place, who having worked in the pillar so long were more familiar than anyone else as to the condition existing in their working place.

The deceased leave a widow and three orphans, a widow and four orphans, and a widow, respectively.

July 30—Wilkeson Coal & Coke Company, Wilkeson: Mike Radich, Austrian, aged 27 years, single, occupation washerman, was killed about 10:30 a. m. July 30 at the washery of the Wilkeson Coal & Coke Company's mine.

The deceased had worked in the cleaning plant for the past six years, and on the morning of the accident had lengthened the drive chain to the shaft that drives the rock elevator, and spoke to the foreman of the shaft wobbling. The shaft is in two pieces and is fastened together near one end by means of a so-called coupling which consists of the hub of an old wheel with the remainder of the wheel broken off. There is a keyway in the hub for its entire length and two short keys were used to fasten the hub to the shaft and turn same, the hub also being fastened by means of four set screws which project out from the periphery of the hub. The shaft is about five feet from the ground.

In order to stop some of the wobbling, the deceased was informed a few minutes before the accident that at noon when the machinery was stopped that he should put a solid key in place of the split one. He evidently went down immediately, for what reason no one knows but probably to look at the coupling, and in some manner his clothes.

were caught by the set screws and his body was carried about the shaft. He was dead when picked up a few minutes later.

Accidents of this kind can be avoided by having all machinery guarded, especially projecting shafts, and using countersunk set screws or removing those not needed.

October 23—Carbon Hill Coal Company, Wingate mine, Carbonado: Leon Bouffoux, Belgian, married, aged 50 years, occupation miner, was killed on October 23, 1915, in No. 24 pillar, third level, Wingate mine.

The deceased and his partner were drawing No. 24 pillar. They were working on the last block above the counter and had started a skip from the breast. The breasts are cogged well as the face of the breast advances and at the time of the accident the deceased was working on the skip about ten feet from a cog. From an examination of the place and the evidence taken at the hearing held after the accident it was evident that the skip was well timbered, the accident being caused by a bump which they frequently have in this mine. The bump discharged the timbers which had been placed along the skip, thereby allowing the top to cave and catch the deceased under the fall.

This accident was apparently unavoidable, as all precautions seem to have been taken to insure the safety of the workmen.

He leaves a widow and five children.

THE RAVENSDALE EXPLOSION.

On November 16 at 1:25 p. m. an explosion in which thirty-one men were killed occurred at the Ravensdale mine, operated by the Northwestern Improvement Company, at Ravensdale, Washington. I was notified of the accident at about 2:30 p. m. while at the Renton mine, and immediately proceeded by automobile to Ravensdale, arriving there at 4:15 p. m.

The Ravensdale mine was opened about twenty years ago, the present company taking over the property some years later. The beds worked in this mine were the No. 3, No. 4, No. 5, and No. 9. The coal is sub-bituminous in character. The mine was opened on the No. 5 bed by two slopes. The coal dips at an angle of from forty-seven degrees at the top of the main slope and flattens to thirty degrees at the bottom. The main slope was used as the hoisting slope. The auxiliary slope, which is 100 feet west of the main slope, was used for taking supplies into the mine. The mine was ventilated by a ten-foot Capell fan which was placed on the return airway on the west side of the auxiliary slope. Both slopes were used as intakes for the air.

At the time of the explosion thirty-four men were in the mine, twenty-eight of whom worked on the third level and six on the second level. On account of a breakdown in the power plant most of the men that worked on the second level were sent home at 11 a. m. on the day of the explosion, only six company men remaining to do repair

work. When the explosion occurred, smoke poured from the entrances of both slopes. The fan was not damaged by the explosion and was speeded up to capacity. Superintendent Scott organized a rescue party which entered the mine as soon as possible after the explosion, going down the auxiliary slope. After clearing some obstructions at the first level, the rescue party reached the second level, where four men, Martin Metzner, John Errington, Mike Demoshak and Mike Ferlich, were found in the rock tunnel to No. 9 seam on west side of the slope. All but Ferlich were overcome by the afterdamp. Demoshak and Metzner were revived when they reached the outside, but Errington died on the way out. The other men on this level were found at the entrance to the rock tunnel to No. 4 seam on the east side of the slope, where they had been killed instantly by the force of the explosion.

On my arrival at the mine I joined the rescue party which was then in the mine. The main slope was badly wrecked by the explosion, which made it impassable. The auxiliary slope was badly caved at the second level. A hole was made through this cave and at 5:00 p. m. a party of miners in charge of Superintendent Scott and State Mine Inspector Bagley reached the third level. This party found the bodies of C. B. Davis, pumpman, and L. DesMartino, cager, about thirty feet east of the main slope. Mine Foreman Kane was next found in the foreman's office about 200 feet farther in on the east side. This party continued to advance on this side until the overcast which conducted the return air across the gangway was reached, or about 400 feet from the main slope. This overcast was found to have been destroyed and gas was encountered a few feet inside of this point. Superintendent Scott returned to the second level to take charge of the work of clearing the slope so that cars could be taken down to remove the bodies that had been found. The others in the party then explored the west side as far as No. 3 chute. The gangway on this side showed much evidence of the violence of the explosion. Gangway sets were blown out and many falls encountered.

After being satisfied that no one on the third level had survived the explosion, the party returned to the second level, where all efforts were concentrated in clearing the cave on the slope, as it was considered unsafe to allow any work beyond this point until this danger had been removed. This work was temporarily completed by 9 a. m. on the morning of the 17th, and the work of removing the bodies from the third level was started.

On that date a rescue party explored the west side and recovered the bodies of three men who were on this side of the mine. The west side was then sealed off temporarily and all efforts were directed in recovering the bodies on the east side. Overcasts and stoppings were found to have been either blown out or damaged, and temporary repairs were made and ventilation established as the work advanced.

The rescue men equipped with rescue apparatus investigated conditions ahead of the brattice crews.

On the 18th at 11:00 a. m. ventilation was established as far as chute No. 37, and on that date the bodies of six men were found on the gangway between No. 37 and No. 43 chutes. The work of clearing the chutes No. 37 to No. 43 was then started, the sixteen bodies remaining in the mine being in this section. This proved to be the most difficult part of the recovery work. The air was carried up No. 37 chute, where two bodies were found on the morning of the 19th. The ventilation was established and the chutes cleared in order, from No. 37 to the inside. On the night of the 19th and the morning of the 20th twelve bodies were recovered. The task of clearing the last two chutes was a difficult one. The last two bodies were recovered late on the evening of Sunday, November 21.

In the rescue and recovery work the mine officials and other employees of the Ravensdale mine, who were not in the mine at the time of the explosion, did all in their power in the work of rescue. When notified of the explosion, the state mine inspector made a request for the assistance of the trained men of the Pacific Coast Coal Company. A team of trained men from Black Diamond reached Ravensdale shortly after the explosion, followed later by teams from the Coal Creek and Burnett mines of that company, each in charge of a mine foreman. Additional help also responded from the Roslyn and Cle Elum mines. Offers of assistance were received from all sides, and nothing was spared to expedite the recovery work. Officials from other coal companies in the state came to Ravensdale and gave every assistance possible. It was conclusively shown that the work of organizing and maintaining trained rescue teams at the different mines in the state helped materially in the recovery work.

Conditions on Third Level Where Explosion Originated.

It was agreed by everyone who made an investigation that the explosion originated somewhere in the battery from No. 37 to No. 43 chute on the east side of the third level, No. 5 seam. No. 5 seam ranges from twenty to twenty-five feet in thickness and was the only seam worked on the third level. No mining was being done on the west side on this level at the time of the explosion. Three company men doing repair work were the only ones on that side.

No. 5 seam on the east side was worked on the double entry system, the upper gangway used as the main haulage and intake airway, the lower gangway as the return. The air was conducted to No. 43 chute, up No. 43 chute and across the top crosscuts to No. 37 chute, down No. 37 chute to first crosscut, where it was carried over the gangway through an overcast driven on the top coal to the lower gangway, or return airway.

No. 5 seam was worked on the chute and pillar system, chutes six feet wide being driven on the bottom coal to the required distance.

The coal was shot from the solid, and Monobel No. 2 powder was used for blasting. When the chute was up the required distance the pillar was cut through to the inside or outside, as the case might be, and the pillar drawn back by working out the bottom coal first, then caving the top coal and loading it out.

Owing to the trouble from spontaneous combustion when the old workings were not sealed off, a battery of from eight to twelve chutes were worked together. A solid pillar of from eighty to one hundred feet was left in between batteries and the battery sealed off when finished.

Motor haulage was used on the gangway. Those on the gangway used open lights. All on the pitch used Wolf safety lamps or electric lamps. Twelve miners, three timber packers and one chute starter were working in the chutes on the pitch at the time of the explosion. Each shift was in charge of a fireboss whose duty was to have general charge of the work and fire all shots. The shots were fired three times each shift. The day shift shooting time was 9 a. m., 12 m., and 3 p. m.

A careful examination was made of all working places from No. 37 to No. 43 chute by the State Mine Inspector, accompanied by a committee appointed by him to determine, if possible, the cause and origin of the explosion. The committee appointed for this purpose was composed of J. F. Menzies, manager, Carbon Hill Coal Company, Carbonado; E. S. Brooks, general superintendent, Washington Union Coal Company, Tono; Martin J. Flyzik, president, and Ernest Newshum, vice president, District No. 10, United Mine Workers of America. After a careful examination of the mine and hearing the testimony of twenty-six witnesses, who worked in the mine, Mr. Menzies, Mr. Flyzik and Inspector Bagley, of the committee, were called as witnesses by the coroner. It was impossible to definitely give the cause of the explosion. It seemed to be the conclusion of the investigation committee that it originated at the face of the chutes from No. 41 to No. 43, possibly in No. 41 chute. The evidence pointed to No. 41 chute for the following reasons: No work had been done at the face of No. 41 chute since the regular shooting time, which was one and one-half hours before the explosion; one man was working in No. 41 on this day, and it was thought that he was probably moving some gas out of his place, which they sometimes had after shots were fired. This would account for no work being done at the face. In some way this gas was ignited, causing a gas explosion which in turn ignited the dust and carried the explosion throughout the mine. The men in No. 41, No. 42, and No. 43 chutes were badly burned, showing that there was more flame at the face of the above chutes than in the others. All on the pitch outside of No. 41 were not burned except the three timber packers in No. 40, who were found in front of the top crosscut from No. 41.

The testimony also showed that the dusty condition of the battery where the explosion was thought to have originated was a recent condition and that the operating company had installed the water system a short time before the accident. They had sprinkled the chutes where the accident occurred on Sunday, two days before the accident occurred, and were taking other precautions to take care of the dust. The fact that most of the chutes were working three shifts accounts to some extent for the amount of dust made.

After thirty-three witnesses had been examined the coroner's jury returned the following verdict:

L. Thibaut came to his death by reason of an explosion of firedamp and coal dust which occurred somewhere between chutes No. 37 and No. 43, on the east side of the main slope to No. 3 level. Thirty other miners also lost their lives.

After a thorough investigation of the Ravensdale mine by a tedious and careful examination, we have been unable to determine definitely the original cause or the exact location of the recent disaster. From the condition of the mine as observed by us and the testimony of the surviving miners who were affected by the concussion, the explosion must have been very violent. The regular current of fresh air supplied to those working in the mine was suddenly stopped by the falling of rock and coal and timbers in the passages through which the bodies of the entombed miners could be reached by immediate relief.

From the best information obtainable, a sufficiency of fresh air was circulated throughout the sections of the mine where the men were at work at the time immediately preceding the explosion, and no laxity on the part of those conducting the operation was shown by the testimony given before us, but aside from diligent inspection and capable management a rigid enforcement of safer and more skillful methods should be exacted of every person employed in this mine.

In a gaseous mine where the dust is dry and "blasting from the solid" is permitted a chamber six feet in width is entirely too narrow. It is hardly possible to drill a hole at the correct angle to assist a charge of powder in making an effective break in the solid body of coal. Extreme caution should be exercised by the "starters" who are obliged to use safety lamps when working near the bottom of the chutes, and we deem it unsafe for an open light to be used on the level by the men who lead and move the cars to and from these chutes.

In the pockets of some of the dead miners, who worked at the faces of the chutes where "safety lamps" were used, were found matches and match boxes and a smoking pipe, in direct violation of offenses defined in our state mining laws.

In conclusion, we do recommend that legislation to further safeguard the lives of men working in the coal mines of the State of Washington be enacted, to the end that the recurrence of a similar disaster may be minimized, and thus a more hopeful feeling of security against such deplorable accidents find lodgment among all of our people.

Dr. J. Tate Mason, Coroner.

John Sullivan, foreman.
John Marlow
Thomas Dobson
James Carson, Jr.
E. F. Lawson
Dennis Driscoll

The conclusion to be derived from this explosion is that more precautions must be taken in dusty mines, especially those that generate explosive gas. Where sprinkling is used to keep down the dust no half-way measures will do, but all parts of the mine must be thoroughly wet down, especially near the working faces where shots are fired. No mixed lights should be used in any gaseous mine, for where safety lamps and open lights are used in the same mine it breeds carelessness among both miners and mine officials. In all mines on safety lamps mine officials are not doing their full duty when an inspection for matches is not made. The safety of the mine depends not only on the mine officials for the rigid enforcement of all rules and regulations for safety, but on the miners themselves to observe and demand that all rules and regulations for their safety are complied with.

November 22—Issaquah & Superior Coal Company, Issaquah: Lance Davis, American, single, aged 19 years, occupation switcher, was killed about 12:20 p. m. on November 22, in main tunnel near mouth of Alvo mine, Issaquah, operated under lease to Andrew Kennedy.

There were no eyewitnesses to the accident, and it is thought that the deceased fell in front of the trip when he went to get off the top of the front car, on which he was riding. The trip on which he was riding was a thirty-car, loaded trip, coming from the inside to the tipple. It was customary for the switcher to get off the trip, run ahead and throw the switch near the mouth of the mine, the motor running slowly, as there is a steep grade. The evidence showed that the deceased fell under the trip about 236 feet inside of the switch, and was dragged about 200 feet. His body was discovered later by the motorman, who noticed a car off the track and went inside to tell the switcher. On learning the deceased was not outside, he went back and found the body under the third car.

Accidents of this kind can be avoided, as in this instance it was not necessary for the switcher to be on the cars, but he was riding there to save the walk past the trip for the purpose of throwing the switch. The deceased had been instructed not to ride the cars, but to ride the motor.

The inspector recommended that in the future no one be permitted to ride on the cars of the trip, but to ride on the motor, and that the platform alongside of the track be extended to a point far enough from the switch, in order that the switcher on getting off the motor could walk to the switch in safety.

December 8—Washington Union Coal Company, Tono: Joe Dropolsky, Polish, age 32, married, occupation miner, was instantly killed on the morning of December 8, while working in No. 13 pillar, third south gangway, Tono mine. The deceased miner and his partner were working on No. 13 pillar, which had been drawn back about eighty feet from the face of the room.

A shot had been fired near the upper end of the pillar on the last working day previous to the accident. The mine foreman had passed through the place about five minutes before the accident occurred, at which time the deceased miner was pulling down the coal loosened by the shot. Before he pulled down all the coal he started to load a car, standing under the loose coal to do so.

A slab of top coal weighing about 300 pounds fell from the rib and caught him against a prop, killing him instantly. If the miner had taken down the loose coal before loading the car as he started to do, this accident would not have happened.

The deceased leaves a widow and four children.

December 10—Carbon Hill Coal Company, Wingate mine, Carbonado: Atlas Guccolo, Italian, single, aged 35 years, occupation miner; Vlahnovich Kasmir, Austrian, married, aged 35 years, occupation miner. The deceased miners were working on third level, No. 30 breast, about forty-five feet above the eleventh crosscut, when a bump occurred which shook or jarred that part of the mine and nearly filled the breast or chute full of coal where the two men were working, killing both.

The so-called "bumps" occur very frequently at this mine, but are very slight when compared to this one. These bumps are caused by insufficient pillars being left in to carry the overlying strata, the cover over the area affected being about 1,600 feet. Breasts had been driven on both sides of No. 30 to the gangway above, leaving a block of coal about 60x80 between No. 29 and No. 31.

This had been standing for some time and the two miners were driving a chute about twelve feet wide to split this block. This block of coal being larger than the others in this section, was supporting a great amount of the pressure from the overlying measures, and as the chute advanced it released this pressure, causing the bump. The bump closed the crosscuts for four or five blocks below where the two miners were working and nearly filled the chute with coal for the same distance. This coal had to be loaded out and the ventilation established before the bodies of the two miners could be recovered, which was several hours later. Kasmir leaves a widow and two children.

After this accident a conference was held with a committee representing the miners and the mine management to see if some means to eliminate the danger from the bumps could be found. After an examination of the mine and a full discussion by all concerned several recommendations were made and a plan of operation approved which is hoped will minimize the danger in the future.

FATAL CASUALTIES, 1916.

Date	NAME	Age	Occupation	Residence	Mar- ried	Single	Widow	Chil- dren	De- pend- ents	CAUSE OF DEATH
Jan. 10	Peter Draskovich	20	Timberman hipcr.	Renton	1				** 2	Electrocuted, feed line.
Mar. 5	Andrew Leiskar	39	Holting engineer	Carbonado	1		1		1	Struck by piece of hoist.†
Mar. 31	Peter Smilnek	28	Miner	Burnett	1	1			* 1	Falling coal and rock.
June 7	Valmer Strelec	38	Outside laborer	Bayne	1		1	4	5	Fell from coal chute.†
June 18	M. Fernandez	33	Miner	Ravensdale	1	1				Electrocuted, trolley wire.
June 29	And. Majetch	42	Miner	Roslyn	1		1	3	2	Fall of rock.
July 29	Mike Wichevich	54	Miner	Roslyn	1	1		4	2	Fall of rock.
July 29	Joe Gavola	51	Miner	Roslyn	1	1			1	Fall of rock.
July 30	Mike Radich	27	Washerman	Wilkeson	1	1				Caught in washery machinery.†
Oct. 23	Leon Bouffoux	50	Miner	Carbonado	1		1	5	5	Fall of rock, bump.
Nov. 16	Joe Krajnc	24	Loader	Ravensdale	1	1				Dust explosion.
Nov. 16	Dom Noverla	35	Timberman	Ravensdale	1	1		1		Dust explosion.
Nov. 16	John Muncie	31	Driver boss	Ravensdale	1	1		1	2	Dust explosion.
Nov. 16	Howard Salter	53	Timber packer	Ravensdale	1	1				Dust explosion.
Nov. 16	Jacob Remshak	45	Timberman	Ravensdale	1	1		4	5	Dust explosion.
Nov. 16	Man. Ponnuchi	50	Timberman hipcr.	Ravensdale	1	1		3	4	Dust explosion.
Nov. 16	Thos. Masiakowski	36	Timber packer	Ravensdale	1	1				Dust explosion.
Nov. 16	Jno. Testa	38	Chute starter	Ravensdale	1	1		1		Dust explosion.
Nov. 16	Edris Minaglia	37	Track cleaner	Ravensdale	1	1		1	2	Dust explosion.
Nov. 16	Louis Morgan	25	Tracklayer	Ravensdale	1	1		1		Dust explosion.
Nov. 16	P. J. Dowd	25	Shot firer	Ravensdale	1	1				Dust explosion.
Nov. 16	T. J. Kane	33	Miner foreman	Ravensdale	1	1		1	1	Dust explosion.
Nov. 16	T. S. Davis	62	Timberman	Ravensdale	1	1		2	1	Dust explosion.
Nov. 16	Noah Goodman	55	Timber packer	Ravensdale	1	1				Dust explosion.
Nov. 16	C. B. Davis	50	Pumpman	Ravensdale	1	1		2	3	Dust explosion.
Nov. 16	Jno. Errington	48	Track cleaner	Ravensdale	1	1		1	2	Dust explosion.
Nov. 16	J. B. Castagna	55	Timber packer	Ravensdale	1	1		3	4	Dust explosion.
Nov. 16	Thos. Speck	30	Motorman	Ravensdale	1	1		3	4	Dust explosion.
Nov. 16	Romeo Medaine	28	Miner	Ravensdale	1	1		1	2	Dust explosion.
Nov. 16	Joe Baldocci	40	Miner	Ravensdale	1	1		1	2	Dust explosion.
Nov. 16	John Storey	57	Miner	Ravensdale	1	1		3	4	Dust explosion.
Nov. 16	Louis Tazoli	38	Miner	Ravensdale	1	1		1	3	Dust explosion.
Nov. 16	Angelo Morris	40	Miner	Ravensdale	1	1		3	4	Dust explosion.

* Mother. ** Father. † Killed outside of mine.

Fatal Casualties, 1915.—Concluded.

Date	NAME	Age	Occupation	Residence	Mar-ried	Single	Widow	Orph-ans	De-pend-ents	CAUSE OF DEATH
Nov. 16	Laander Thibault	55	Miner	Ravensdale	1		1		1	Dust explosion.
Nov. 16		48	Miner	Ravensdale	1		1	4	5	Dust explosion.
Nov. 16		55	Miner	Ravensdale	1		1	1	2	Dust explosion.
Nov. 16		27	Miner	Ravensdale	1		1	1	2	Dust explosion.
Nov. 16		29	Miner	Ravensdale	1		1	1	2	Dust explosion.
Nov. 16		26	Miner	Ravensdale	1		1	3	3	Dust explosion.
Nov. 16		44	Miner	Ravensdale		1				Dust explosion.
Nov. 16		27	Oager	Ravensdale		1				Dust explosion.
Nov. 22		19	Switcher	Issaquah		1				Dust explosion.
Dec. 8	Joe Thompson	32	Miner	Tono	1		1	4	5	Mine car, run over by.
Dec. 10	A. Guccolo	36	Miner	Carbonado		1				Fall of coal.
Dec. 10	V. Kasimr	32	Miner	Carbonado	1		1	2	3	Flying coal, bump.
	Totals				126	17	26	69	84	

Two killed outside of mine and 26 underground. One killed outside of mine and 16 underground.

RECAPITULATION OF FATAL CASUALTIES, 1915.

Residence	No.	Occupation	No.	Nationality	No.	Cause of Death	No.	Name of Mine	No.
Bayne.....	1	Chute starter	1	American.....	6	Caught in washery machinery	1	Carbon Coal & Clay Co., Old Carbon outside	1
Burnett.....	1	Driver boss	1	Austrian.....	15	Electrocuted, feed line	1	Carbon Hill Coal Co., Wingate	3
Carbonado.....	4	Engineer	1	English.....	2	Electrocuted, trolley wire	1	Carbon Hill Coal Co., No. 6	1
Isaquah.....	1	Laborer, outside	1	German.....	12	Explosion of dust	31	Northwestern Improvement Co., No. 3	3
Ravensdale.....	82	Loader	1	Italian.....	1	Fall of coal and rock	1	Northwestern Improvement Co., Ravensdale	32
Renton.....	1	Mine foreman	22	Montegian.....	1	Fall of rock	1	Isaquah	1
Roslyn.....	3	Miner	1	Norwegian.....	1	Fell from chute, outside	4	Pacific Coast Coal Co., Burnet	1
Tono.....	1	Motorman	1	Pole.....	2	Flying coal, pump	1	Co., Renton	1
Wilkeson.....	1	Pumpman	1	Negro.....	2	Mine cars run over by	2	Washington Union Coal Co., Tono mine	1
.....	.....	Shotfirer	1	Belgian.....	1	Struck by piece of hoist	1	Wilkeson Coal Co., washery	1
.....	.....	Switcher	3	Spanish.....	1	.....	.....	.....	.....
.....	.....	Timberman	2	Welsh.....	1	.....	.....	.....	.....
.....	.....	Timberman helper	4	.....	.....	.....	.....	.....	.....
.....	.....	Timber packer	2	.....	.....	.....	.....	.....	.....
.....	.....	Track cleaner	1	.....	.....	.....	.....	.....	.....
.....	.....	Track layer	1	.....	.....	.....	.....	.....	.....
.....	.....	Washerman	1	.....	.....	.....	.....	.....	.....
Totals*	45	.....	45	.....	45	.....	45	.....	45

* Three were killed on surface and 42 underground.

Table showing Days Operated, Tonnage Mined, Number of Employees, Number of Men Injured, Number of Men Returned to Work, at Each Mine, 1915.

Returned to Work, and Number of Injured Returned to Work, at Each Mine, 1915.

NAME OF MINE	Aver- age Days Oper- ated	Short Tons Per Mine Per Year	Number of Employees			Number of Men Injured			Time Lost (Days) of Men Returned to Work			Number of Injured Returned to Work		
			Inside	Outside	Total	Inside	Outside	Total	Inside	Outside	Total	Inside	Outside	Total
KING COUNTY--														
Bayne	205	50,397	66	19	85	10	4	14	272	49	321	10	4	14
Black River (a)	205	305	...	...	...	...	...	...	...	...	...	...	...	...
Cannon, Franklin	193	5,196	98	45	143	3	1	4	28	12	40	2	1	3
Denny-Renton, Renton	277	9,822	13	1	14	1	1	2	43	9	57	1	1	2
Durham	221	18,854	25	18	43	2	2	4	61	124	175	2	2	4
Eureka .....	...	4,500	...	...	...	...	...	...	...	...	...	...	...	...
Hyde (d)	61	40,271	129	43	174	3	...	3	97	...	97	3	...	3
Issaquah	14	1,098	31	12	43	12	6	18	651	503	752	12	6	18
Navy	146	133,686	326	93	419	49	...	3	95	...	95	2	...	2
Pacific Coast Coal Co., No. 11	1094	44,512	106	42	148	10	1	11	1,080	8	1,088	49	1	50
Pacific Coast Coal Co., No. 14	1853	238,343	162	137	299	21	2	23	330	4	334	10	1	11
Pacific Coast Coal Co., Ford	288	22,021	25	10	35	9	1	10	917	35	952	21	2	23
Preshontas	200	124,347	86	65	153	17	4	21	168	22	230	9	1	10
Ravensdale	245	120,948	174	43	217	61	3	64	500	44	533	17	4	21
Renton, P. & T., L. & P. Co.	231	9,336	17	19	36	9	2	11	1,500	32	1,532	60	2	62
Sunset, National Coal Co.	130	21,380	32	6	38	2	...	2	164	72	236	9	2	11
Taylor .....	...	...	...	...	...	...	...	...	70	...	70	2	...	2
The County.	† 155	344,000	1,296	564	1,860	212	23	240	6,0804	5013	6,582	211	27	238
KITITAS COUNTY--														
Northwestern Imp. Co., No. 6 .....	...	...	...	...	...	36	...	36	1,196	...	1,196	25	...	25
Northwestern Imp. Co., Dtp. ....	...	...	...	...	...	6	1	7	237	8	245	6	1	7
Northwestern Imp. Co., No. 5 and Dtp.	124	140,457	237	37	274	42	1	43	1,433	8	1,441	41	1	42
Northwestern Imp. Co., No. 3	117	155,570	267	15	282	56	...	56	1,396	...	1,396	55	...	55
Northwestern Imp. Co., No. 5	120	86,763	148	14	162	15	2	17	317	19	336	15	2	17
Northwestern Imp. Co., No. 7	117	114,008	180	13	193	35	...	35	609	...	609	26	...	26
Northwestern Imp. Co., One Elum.	119	89,012	177	16	193	21	...	21	403	...	403	21	...	21
Northwestern Imp. Co., outside (c) .....	...	...	...	...	...	...	5	5	...	249	249	...	5	5
Roslyn Cascade Coal Co., No. 1 .....	...	...	...	...	...	4	...	4	63	...	63	4	...	4
Roslyn Cascade Coal Co., No. 2 .....	...	...	...	...	...	3	...	3	119	...	119	3	...	3
Roslyn Cascade Coal Co., all mines	151	71,638	94	11	105	7	...	7	181	...	181	7	...	7

* Includes all non-fatal accidents for which compensation for time lost has been paid by the Industrial Insurance Commission. Does not include accidents happening to office workers. † Found by dividing the sum of the products of the total number of men employed and days worked at each mine by the total number of men employed. (a) Under development. (b) Operated 2 months. (c) Not assignable to any one mine. (d) Driving rock tunnel.

Table Showing Days Operated; Tonnage Mined; Number of Employees; Number of Men Injured;* Time Lost by Men Returned to Work, and Number of Injured Returned to Work, at Each Mine, 1915.—Continued.

NAME OF MINE	Average Days Operated	Short Tons Per Mine Per Year	Number of Employees		Number of Men Injured		Time Lost (Days) of Men Returned to Work		Number of Injured Returned to Work		
			Inside	Outside	Total	Inside	Outside	Total	Inside	Outside	Total
KITTITAS COUNTY (Continued)—											
Roslyn Coal & Coke Co., Plant.....	180	7,328	13	5	18	6	.....	951	6	.....	6
Roslyn Fuel Co., No. 1.....	164	136,387	136	20	156	19	2	30	19	2	20
Roslyn Fuel Co., No. 2.....	149	61,515	70	8	78	11	1	28	9	1	10
Roslyn Fuel Co., No. 3 (a).....	.....	.....	.....	.....	.....	3	.....	78	3	.....	3
Roslyn Fuel Co., Summit.....	97	15,041	44	11	55	7	1	3	7	1	8
T. B. Wright & Sons.....	22	683	7	2	9	.....	.....	275	.....	.....	.....
The County.....	† 127	879,062	1,382	152	1,534	222	12	387	6,195	217	12
LEWIS COUNTY—											
Chenalis Coal Company.....	.....	2,000	.....	.....	†	1	.....	390	1	.....	1
Divide.....	105	1,308	6	3	9	2	.....	78	2	.....	2
Empress.....	88	5,144	12	4	16	.....	.....	.....	.....	.....	.....
Ford's Prairie.....	122	4,677	6	2	8	.....	.....	.....	.....	.....	.....
Ladd.....	311	3,476	5	1	6	.....	.....	.....	.....	.....	.....
Mendota.....	110	38,774	50	10	60	6	1	11	238	6	7
Monarch.....	90	4,960	8	3	11	.....	.....	15	1	.....	1
Sheldons.....	297	9,417	7	2	9	1	.....	484	3	.....	3
Superior.....	217	8,518	11	3	14	3	.....	.....	.....	.....	.....
The County.....	† 138	78,259	105	28	133	13	1	763	13	1	14
PIERCE COUNTY—											
Burnett.....	107	84,451	199	57	256	42	3	1,137	42	3	45
Carbonado outside (c).....	.....	.....	.....	.....	.....	.....	.....	341	18	18	18
Carbonado, Wingate.....	.....	.....	.....	.....	.....	17	1	224	17	1	18
Carbonado, Denty (2 and 3).....	.....	.....	.....	.....	.....	12	.....	166	11	.....	11
Carbonado, Electric Slope.....	.....	.....	.....	.....	.....	6	.....	186	6	.....	6
Carbonado, No. 6.....	.....	.....	.....	.....	.....	9	.....	168	9	.....	9
Carbonado, Carbon (No. 9).....	.....	.....	.....	.....	.....	5	.....	90	5	.....	5
Carbonado, Miller.....	.....	.....	.....	.....	.....	19	.....	432	19	.....	19
Carbonado, all mines.....	258	190,469	279	125	404	68	19	1,351	67	19	86

* Includes all non-fatal accidents for which compensation for time lost has been paid by the Industrial Insurance Commission. Does not include accidents happening to office workers. † Found by dividing the sum of the products of the total number of men employed and days worked at each mine by the total number of men employed. ‡ None given, mine has less than 10 men employed at one time in and about mine. (a) Under development. (c) Not assignable to any one mine.

Table Showing Days Operated; Tonnage Mined; Number of Employees; Number of Men Injured; Time Lost by Men Returned to Work, and Number of Injured Returned to Work, at Each Mine, 1916.—Concluded.

NAME OF MINE	Average Days Operated	Short Tons Per Mine Per Year	Number of Employees		Number of Men Injured		Time Lost (Days) of Men Returned to Work			Number of Injured Returned to Work	
			Inside	Outside	Total	Inside	Outside	Total	Inside	Outside	Total
PIERCE COUNTY (Continued)											
Fairfax	311	20,634	48	26	74	7	105	8	113	7	8
Gale Creek	146	19,586	47	11	58	9	215	91	306	9	10
Melmont	96	18,446	41	15	56	1	20	55	75	1	3
Montezuma	327	16,745	41	35	76	9	110	110	110	9	9
South Willis	79	1,186	4	3	7						
Spiketon	111	17,743	41	21	62	6	108	11	119	6	7
Wilkeson, outside (e)								218	218	14	14
Wilkeson, East 3						2	237		237	2	2
Wilkeson, South 1						9	212		212	9	9
Wilkeson, South 2						6	59		59	6	6
Wilkeson, South 3						7	161		161	7	7
Wilkeson, all mines	286	110,425	113	73	186	24	670	219	889	24	38
The County	235	489,008	613	366	1,179	105	3,033	763	4,396	165	206
THURSTON COUNTY											
Hucoda Coal Company	157	112,006	73	32	104	1	5		5	1	1
Hanniford, Tono						4	68		68	4	4
The County						5	73		73	5	5
WHATCOM COUNTY											
Blue Canyon	222	6,255	16	3	19	1	17		17	1	1
Washington Anthracite Coal Co. (a)						5	207		207	5	5
The County	222	6,255				6	224		224	6	6
The State	165	2,409,331	3,638	1,145	4,583	624	16,563	1,616	18,184	617	693

* Includes all non fatal accidents for which compensation for time lost has been paid by the Industrial Insurance Commission. Does not include accidents happening to office workers. † Found by dividing the sum of the products of the total number of men employed and days worked at each mine by the total number of men employed. ‡ None given, mine has less than 10 men employed at one time in and about mines. (a) Under development. (e) Not assignable to any one mine.

Table Showing Number of Injured Not Returned to Work; Number of Tons Mined Per Man Injured; Average Time Lost Per Man Returned to Work, and Number of Employees to Each Man Injured, at Each Mine, 1915.

NAME OF MINE	Number of Injured Not Returned to Work		Number of Tons Mined Per Man Injured		Average Time Lost Per Man Returned to Work		Number of Employees to Each Man Injured	
	Inside	Outside	Inside	Outside	Inside	Outside	Inside	Outside
KING COUNTY--								
Bayne River (a)			5,089.7	12,599.3	3,399.3			
Black River (a)			1,782.0	5,190.0	1,299.0			
Cannon, Franklin			9,822.0	9,427.0	4,911.0			
Denny-Renton, Renton			9,427.0		4,713.5			
Durham								
Eureka								
Hyde (d)								
Issaquah			8,355.9	6,711.8	2,237.2			
Navy			986.0		306.0			
Pacific Coast Coal Co., No. 11			2,728.2	183,698.0	2,673.7			
Pacific Coast Coal Co., No. 14			4,451.2	44,512.0	4,046.5			
Pacific Coast Coal Co., Ford			11,349.7	119,171.5	10,362.7			
Pocahontas			2,446.7	22,021.0	2,202.1			
Ravensdale			7,314.5	31,086.7	5,921.3			
Renton, P. S. T. L. & P. Co.	1	2	40,316.0	1,899.3	25.00			
Sunset, National Coal Co.			1,086.2	947.8	13.50			
Taylor			10,690.0	4,663.0	10,690.0			
The County	1	1	3,965.6	30,177.3	3,520.6			
KITTITAS COUNTY--								
Northwestern Imp. Co., No. 6	1							
Northwestern Imp. Co., Dip (b)								
Northwestern Imp. Co., No. 6 and Dip	1							
Northwestern Imp. Co., No. 3			3,244.2	140,457.0	3,236.4			
Northwestern Imp. Co., No. 2	1		2,778.0		2,778.0			
Northwestern Imp. Co., No. 7			5,784.2	43,861.5	5,108.7			
Northwestern Imp. Co., Cle Elum			3,276.8		21.13			
Northwestern Imp. Co., outside (c)			4,288.6		4,288.6			
Redlyn Cascade Coal Co., No. 1								
Redlyn Cascade Coal Co., No. 2								
Redlyn Cascade Coal Co., all mines			10,284.0		10,284.0			
Redlyn Cascade Coal Co., (a) Under development.								
Redlyn Cascade Coal Co., (b) Operated two months.								
Redlyn Cascade Coal Co., (c) Not assignable to any one mine.								
Redlyn Cascade Coal Co., (d) Driving rock tunnel.								

(a) Under development. (b) Operated two months. (c) Not assignable to any one mine. (d) Driving rock tunnel.

Table Showing Number of Injured Not Returned to Work; Number of Tons Mined Per Man Injured; Average Time Lost Per Man Returned to Work, and Number of Employees to Each Mine, 1915.—Continued.

NAME OF MINE	Number of Injured Not Returned to Work			Number of Tons Mined Per Man Injured			Average Time Lost Per Man Returned to Work			Number of Employees to Each Man Injured		
	Inside	Outside	Total	Inside	Outside	Total	Inside	Outside	Inside and Outside	Inside	Outside	Inside and Outside
KITTITAS COUNTY (Continued)—												
Roslyn Coal & Coke Co., Plant				1,220.5		1,220.5	15.91		15.91	2.2		3.0
Roslyn Fuel Co., No. 1	1		1	7,179.2		7,179.2	37.91	15.00	35.42	7.2	10.0	7.4
Roslyn Fuel Co., No. 2	2		2	5,592.2		5,592.2	30.89	23.00	30.00	6.4	8.0	6.5
Roslyn Fuel Co., No. 3 (a)							26.00		26.00			
Roslyn Fuel Co., Summit				2,143.7	15,041.0	1,830.1	29.29	3.00	34.75	6.3	11.0	6.9
T. B. Wright & Sons												
The County	5		5	3,959.7	73,255.1	3,753.6	26.99	23.06	27.05	6.2	13.7	6.0
LEWIS COUNTY—												
Chehalis Coal Company				3,000.0		3,000.0	300.00		300.00			
Divide				651.5		651.5	30.00		30.00	3.0		4.5
Empress												
Ford's Prairie												
Ladd												
Mendota				5,452.3	38,774.0	5,339.1	37.33	11.00	34.00	8.3	10.0	8.6
Monarch												
Sheldons				9,417.0		9,417.0	15.00		15.00	7.0		9.0
Superior				2,839.3		2,839.3	14.50		14.50	3.7		4.7
The County				6,019.9	73,239.0	5,589.9	37.90	11.00	54.00	8.1	28.0	9.5
PIERCE COUNTY												
Burnett												
Carbonado, outside (c)				2,010.9	23,153.7	1,570.9	27.07	11.00	26.00	4.7	19.0	5.7
Carbonado, Wingate								13.94	13.94			
Carbonado, Douly (2 and 3)							19.17	9.00	12.94			
Carbonado, Electric Slope	1		1				15.09		15.09			
Carbonado, No. 6							31.00		31.00			
Carbonado, Carbon (No. 6)							13.11		13.11			
Carbonado, Miller							13.00		13.00			
Carbonado, all mines	1		1	2,003.3	10,499.3	2,393.7	22.73	11.00	22.73	4.1	6.5	4.6

(a) Under development. (c) Not assignable to any one mine.

Table Showing Number of Injured Not Returned to Work; Number of Tons Mined Per Man Injured; Average Time Lost Per Man Returned to Work, and Number of Employees to Each Mine Injured, at Each Mine, 1915.—Concluded.

NAME OF MINE	Number of Injured Not Returned to Work		Number of Tons Mined Per Man Injured		Average Time Lost Per Man Returned to Work		Number of Employees to Each Man Injured	
	Inside	Outside	Total	Inside	Outside	Total	Inside	Outside
PIERCE COUNTY (Continued)—								
Fairfax	—	—	—	—	—	—	—	—
Gale Creek	—	—	—	—	—	—	—	—
Belmont	—	—	—	—	—	—	—	—
Montezuma	—	—	—	—	—	—	—	—
South Willis	—	—	—	—	—	—	—	—
Spiketon	—	—	—	—	—	—	—	—
Wilkeson, outside (c)	—	—	—	—	—	—	—	—
Wilkeson, East 3	—	—	—	—	—	—	—	—
Wilkeson, South 1	—	—	—	—	—	—	—	—
Wilkeson, South 2	—	—	—	—	—	—	—	—
Wilkeson, South 3	—	—	—	—	—	—	—	—
Wilkeson, all mines	—	—	—	—	—	—	—	—
The County	1	—	1	2,948.9	11,919.3	2,860.8	22.00	18.69
THURSTON COUNTY—								
Bucoda Coal Company	—	—	—	—	—	—	—	—
Hanniford, Tono	—	—	—	—	—	—	—	—
The County	—	—	—	—	—	—	—	—
WHATCOM COUNTY—								
Blue Canyon	—	—	—	—	—	—	—	—
Washington Anthracite Coal Co. (a)	—	—	—	—	—	—	—	—
The County	—	—	—	—	—	—	—	—
The State	7	1	8	8,861.1	29,383.1	3,412.6	26.86	19.96
							5.9	15.9

(a) Under development. (c) Not assignable to any one mine.

CAUSE OF INJURY	Number Injured		Time Lost (Days) Men Returned to Work		Per- centage of In- juries	NATURE OF INJURY	Number Injured		Time Lost (Days) Men Returned to Work		Per- centage of In- juries
	Inside	Outside	Total	Total			Average	Total	Average		
Axe	21	1	22	474½	3.12	Ankles bruised	8	2	10	18.50	1.42
Afterdamp	1	1	2	28.00	0.14	Ankles dislocated	1	1	2	6.00	0.14
Bar	1	3	4	9.75	0.57	Ankles sprained	13	3	16	23.00	2.27
Bump in mine	4	4	8	15.50	0.57	Arm broken	3	3	6	73.25	0.43
Cart in	2	2	4	24.50	0.28	Arm bruised	9	2	11	14.13	1.56
Chute spout	2	2	4	72.50	0.28	Arm burned	1	1	2	22.00	0.14
Chute	1	1	2	26.00	0.14	Arm injured	1	1	2	17.00	0.14
Coal	7	2	9	18.25	1.28	Back bruised	36	4	40	19.86	4.25
Coal coming down chute	10	10	20	27.70	1.42	Back injured	4	4	8	179.00	0.57
Coke	1	2	3	8.50	0.28	Back strained	31	2	33	24.50	4.67
Door fell	1	1	2	3.00	0.14	Body bruised	18	2	20	28.30	2.36
Engine	2	2	4	6.75	0.28	Body injured	3	3	6	15.00	0.43
Explosion of gas	29	2	31	32.58	4.11	Chest cut	1	1	2	12.00	0.14
Fall of clay chod	4	4	8	22.00	0.57	Chest bruised	3	3	6	14.12	0.57
Fall of coal	78	78	156	19.00	11.05	Collar bone broken	1	1	2	72.00	0.14
Fall of rock	130	1	131	28.01	18.56	Elbow bruised	4	4	8	17.00	0.57
Fell down chute	3	3	6	24.00	0.43	Elbow broken	1	1	2	32.00	0.14
Fell	6	5	11	29.70	1.56	Elbow cut	2	1	3	12.33	0.42
Flying coal	60	60	120	17.85	8.50	Elbow dislocated	2	2	4	16.50	0.28
Flying object	1	1	2	6.00	0.14	Eye bruised	28	2	30	15.10	3.97
Fell through trestle	1	1	2	91.00	0.14	Eye destroyed	4	4	8	73.00	0.57
Hammer	1	1	2	104.00	0.14	Eye injured	30	1	31	14.29	5.24
Jumped off car	2	2	4	50.00	0.28	Face bruised	9	4	13	14.19	1.84
Lifting	31	2	33	28.00	4.67	Face burned	4	4	8	9.75	0.57
Locomotive, steam	1	1	2	12.00	0.14	Face cut	5	5	10	10.50	0.71
Machinery	1	1	2	15.50	1.28	Foot bruised	36	3	39	22.07	5.53
Mine cable	1	1	2	8.50	0.28	Foot broken	1	3	4	36.00	0.14
Mine cars	47	10	57	29.35	3.07	Foot cut	2	2	4	24.50	0.57
Mine car and loose clothing	1	1	2	14.00	0.14	Foot cut off	1	1	2	159.00	0.14
Mine car and rail	1	1	2	23.00	0.14	Foot infected	7	1	8	11.00	0.14
Mining machine	3	3	6	37.33	0.43	Foot injured	2	2	4	32.40	1.42
Mine car and timber	15	15	30	62.80	2.12	Foot punctured	9	2	11	5.00	0.28
Motor	1	1	2	234.00	0.14	Foot sprained	1	1	2	3.00	0.14
Motor and car	2	2	4	49.00	0.43	Foot mashed	4	4	8	32.50	0.57
Motor and timber	2	2	4	62.00	0.28	Finger bruised	28	3	31	22.18	3.54

* Includes all non-fatal accidents for which compensation for time lost has been paid by the Industrial Insurance Commission. Does not include accidents happening to office workers. † One not returned to work. ‡ Three not returned to work. § Two not returned to work.

Recapitulation of Non-Fatal Accidents; Cause of Injury; Nature of Injury, and Time Lost, 1915.—Continued.

CAUSE OF INJURY	Number Injured			Time Lost (Days) Men Returned to Work		Per- centage of In- juries
	Inside	Outside	Total	Men Returned to Work		
				Total	Average	
Mine pump	2	.....	2	66	33.00	0.23
Mine	5	.....	5	95	19.00	0.71
Nail	8	.....	8	143	13.00	1.56
Pick	11	1	12	160	13.33	1.70
Piece of sheet iron	2	.....	2	23	11.50	0.23
Pipe fell	3	.....	3	16	5.33	0.43
Powder smoke	1	.....	1	19	19.00	0.14
Pushing car	5	.....	5	135	27.00	0.71
Pulley wheel	3	.....	3	52	17.33	0.43
Rail fell	3	.....	3	73	24.33	0.43
Rock	11	2	13	342	26.31	1.84
Rock hoist .....	.....	1	1	9	9.00	0.14
Rolling coal	5	.....	5	68	13.60	0.71
Room rope	6	.....	6	74	12.33	0.85
Saw .....	.....	1	1	13	13.00	0.14
Slipped and fell †	49	12	61	1,845	31.33	8.50
Silver of timber	5	.....	5	68	12.60	0.87
Sprag and car	6	1	7	182	26.00	0.99
Struck by shot	1	.....	1	78	78.00	0.14
Struck by timber	10	6	16	385	24.09	2.27
Timber	16	1	17	430	25.29	2.41
Timber coming down chute	2	.....	2	45	22.50	0.23
Tools	1	.....	1	26	13.00	0.23
Trolley guard	1	.....	1	9	9.00	0.14
Trolley wire, live	2	.....	2	134	44.66	0.43
Wire, mine cable	2	.....	2	184	44.66	0.43
Wheelbarrow	5	.....	5	114	22.80	0.71
Windless	2	.....	2	41	20.50	0.23
Finger broken	2	.....	2	216	54.00	0.87
Finger cut	14	2	16	246	15.37	2.27
Finger infected	11	.....	11	199	18.09	1.56
Finger injured	8	2	10	76	15.20	0.71
Finger mashed	18	2	20	305	30.33	2.12
Finger cut off	2	.....	2	35	17.50	0.23
Hand bruised	15	3	18	481	26.72	2.55
Hand burned	1	.....	1	26	26.00	0.14
Hand cut	10	1	11	176	16.00	1.56
Hand infected †	9	2	11	296	26.90	1.93
Hand injured	3	2	5	194	38.80	0.71
Hand mashed	1	.....	1	20	20.00	0.14
Hand punctured	2	.....	2	23	11.50	0.23
Head and face burned	21	1	22	875	39.79	3.12
Head bruised	4	.....	4	86	9.00	0.87
Head cut	1	.....	1	4	4.00	0.14
Head cut †	15	.....	15	135	9.00	0.14
Head injured	1	.....	1	4	4.00	0.14
Heel bruised .....	.....	1	1	6	6.00	0.14
Hernia	9	.....	9	680	68.00	1.42
Hip bruised	7	.....	7	113	16.14	0.99
Hip broken	1	.....	1	208	208.00	0.14
Internal injury	2	.....	2	293	146.50	0.23
Knee bruised	6	2	8	200	25.00	1.14
Knee cut	4	.....	4	404	101.00	0.57
Knee injured	2	.....	2	139	69.50	0.23
Knee infected	2	.....	2	23	11.50	0.23
Knee sprained	2	.....	2	244	48.80	0.71
Leg broken	7	.....	7	927	132.42	0.99
Leg bruised †	40	4	44	702	15.92	6.24
Leg cut	2	.....	2	104	52.00	0.43
Leg injured	2	.....	2	155	77.50	0.71
Leg infected	2	.....	2	16	8.00	0.23
Leg sprained	2	.....	2	82	41.00	0.33
Lip cut	1	.....	1	5	5.00	0.14
Nose broken .....	.....	.....	.....	20	20.00	0.14

† One not returned to work.

† One not returned to work.

Recapitulation of Non-Fatal Accidents; Cause of Injury; Nature of Injury, and Time Lost, 1915.—Concluded.

CAUSE OF INJURY	Number Injured		NATURE OF INJURY	Time Lost (Days) Men Returned to Work		Per- centage of In- juries		
	Inside	Outside		Total	Average			
							Inside	Outside	Total	Average
	1	1	Nose cut	1	1	12	12.00	0.14
	1	1	Overcome by afterdamp	1	1	28	28.00	0.14
	1	1	Overcome by powder	1	1	19	19.00	0.14
	2	2	smoke	2	2	202	101.50	0.28
	2	2		2	2	474	15.38	0.48
	24	24		24	24	704	29.08	3.89
	14	14		14	14	286	19.06	2.12
	2	2	Shoulder dislocated	2	2	68	34.00	0.28
	1	1	Shoulder injured	1	1	43	43.00	0.14
	1	1	Shoulder sprained	1	1	16	16.00	0.14
	5	3	Side bruised †	5	3	212	30.28	1.14
	1	1	Side injured	1	1	18	18.00	0.14
	2	1	Side sprained	2	1	34	11.33	0.42
	2	1	Thigh bruised	2	1	46	13.33	0.48
	1	1	Thigh punctured	1	1	35	35.00	0.14
	4	4	Thumb bruised	4	4	76	19.00	0.57
	1	1	Thumb broken	1	1	31	31.00	0.14
	9	9	Thumb cut	9	9	118	13.11	1.28
	2	2	Thumb cut off †	2	2	43	42.00	0.28
	1	1	Thumb infected	1	1	33	33.00	0.14
	4	4	Thumb injured	4	4	29	29.00	0.14
	4	4	Thumb mashed	4	4	101	25.25	0.57
	1	1	Toes bruised	1	1	68	17.00	0.57
	4	4	Toes broken	4	4	126	25.50	0.71
	2	2	Toes infected	2	2	19	9.50	0.28
	1	1	Toes injured	1	1	23	23.00	0.14
	6	6	Toes mashed	6	6	60	20.00	0.48
	1	1	Wrist bruised	1	1	84	14.00	0.86
	4	4	Wrist broken	4	4	134	44.00	0.48
	1	1	Wrist cut	1	1	96	18.00	0.71
	6	6	Wrist mashed	6	6	9	9.00	0.14
	1	1	Wrist sprained	1	1	136	19.42	0.86
Totals **	624	82		706		18,184	26.05	100.00

† One not returned to work. ** Eight not returned to work.

RECAPITULATION OF NON-FATAL ACCIDENTS, 1915.

RESIDENCE	Number Injured			NATION- ALITY	Number Injured			OCCUPATION	Number Injured			NAME OF MINE	Number Injured		
	In- side	Out- side	Inside and Out- side		In- side	Out- side	Inside and Out- side		In- side	Out- side	Inside and Out- side		In- side	Out- side	Inside and Out- side
Bayne.....	10	4	14	American.....	95	32	127	Brakeman.....	2	1	3	Bayne.....	10	4	14
Black Diamond.....	59	3	62	Austrian.....	156	12	168	Bucker.....	11	1	12	Rice Canyon.....	1	1	2
Buckley.....	3	3	6	Belgian.....	10	1	11	Cager.....	11	1	12	Rucoda Coal Co.....	1	1	2
Bucoda.....	1	1	2	Bulgarian.....	2	1	3	Carpenter.....	6	6	12	Burnett.....	42	3	45
Burnett.....	30	3	33	Canadian.....	6	1	7	Car dropper.....	1	8	9	Cannon.....	3	1	4
Carbonado.....	68	19	87	Croatian.....	2	2	4	Car repairer.....	1	1	2	Carbonado, outside.....	17	18	35
Chehalis.....	5	5	10	Dalmatian.....	2	2	4	Chute starter.....	3	3	6	Carbonado, Wingate.....	12	1	13
Cie Elum.....	61	2	63	English.....	38	1	39	Coke puller.....	1	9	10	Carbonado, Douty.....	12	1	13
Cumberland.....	13	2	15	Finn.....	51	5	56	Coupler.....	11	2	13	Carbonado, Electric Slope.....	6	6	12
Divide.....	2	2	4	French.....	8	3	11	Driver.....	11	1	12	Carbonado, No. 6.....	9	9	18
Durham.....	2	2	4	German.....	3	1	4	Dumper.....	1	7	8	Carbonado, No. 9.....	5	5	10
Fairfax.....	16	1	17	Greek.....	1	1	2	Electrician.....	1	1	2	Carbonado, Miller.....	19	1	20
Franklin.....	5	5	10	Hungarian.....	3	3	6	Engineer.....	1	7	8	Chehalis Coal Co.....	1	1	2
Glacier.....	5	5	10	Irish.....	5	5	10	Fireboss.....	3	1	4	Denny-Renton.....	1	1	2
Isaiah.....	12	6	18	Italian.....	119	4	123	Fireman.....	3	4	7	Divide.....	2	2	4
Meimont.....	1	2	3	Mexican.....	1	1	2	Holstman.....	2	4	6	Durham.....	2	2	4
Mendota.....	6	1	7	Montenegro.....	9	9	18	Laborer.....	27	20	47	Fairfax.....	7	1	8
New Castle.....	21	2	23	Lithuanian.....	6	6	12	Loader.....	6	3	9	Ford.....	21	2	23
Palmer.....	9	1	10	Negro.....	2	2	4	Machinist.....	8	8	16	Gale Creek.....	9	1	10
Park.....	1	1	2	Norwegian.....	2	1	3	Machine man.....	1	1	2	Hanford.....	4	4	8
Ravensdale.....	17	4	21	Pole.....	27	3	30	Mine foreman.....	1	1	2	Hyde.....	3	3	6
Renton.....	62	4	66	Scotch.....	17	17	34	Mine inspector.....	472	1	473	Isaiah.....	12	6	18
Ronald.....	22	4	26	Scotch.....	10	1	11	Miner.....	5	1	6	Meimont.....	1	2	3
Roatyn.....	139	10	149	Serbian.....	9	9	18	Motorman.....	5	5	10	Montezuma.....	9	9	18
South Prairie.....	1	1	2	Slav.....	7	4	11	Motorman helper.....	5	1	6	Montezuma.....	6	1	7
Spokane.....	4	1	5	Swede.....	13	5	18	Rucker.....	1	1	2	Navy.....	3	3	6
Taylor.....	2	2	4	Swiss.....	1	1	2	Pumper.....	2	2	4	Northwestern Imp. Co., No. 3.....	56	2	58
Tono.....	4	4	8	Turk.....	1	1	2	Roller man.....	1	3	4	Northwestern Imp. Co., No. 5.....	19	2	21
Wilkeson.....	34	15	49	Wash.....	24	7	31		1	1	2	Northwestern Imp. Co., No. 7.....	36	36	72

Recapitulation of Non-Fatal Accidents, 1915.

Continued.

RESIDENCE	Number Injured			NATION-ALITY	Number Injured			OCCUPATION	Number Injured			NAME OF MINE	Number Injured		
	In-side	Out-side	Inside and Out-side		In-side	Out-side	Inside and Out-side		In-side	Out-side	Inside and Out-side		In-side	Out-side	Inside and Out-side
								Rope man.....				Northwestern Imp. Co., out-side, Roslyn, Ore. Elum.....	6	5	5
								Rope rider.....	3	1	4	Northwestern Imp. Co., Dip.....	1	1	7
								Screeners.....				Northwestern Imp. Co., Ore. Elum.....	21		21
								Shot lighter.....	1		1	Pacific Coast Coal Co., No. 11.....	49		50
								Shovelers.....	3		3	Pacific Coast Coal Co., No. 14.....	10	1	11
								Switcher.....				Pocahontas.....	9	1	10
								Teamster.....	22		22	Ravenstale.....	17	4	21
								Timberman.....	3		3	Renton.....	61	3	64
								Timberman helper.....	17		17	Roslyn Cascade Coal Co., No. 1.....	4		4
								Timber packer.....	3		3	Roslyn Cascade Coal Co., No. 2.....	3		3
								Track layer.....	2		2	Roslyn Coal & Coke Co., Plant.....	6		6
								Tracklayer helper.....	2		2	Roslyn Fuel Co., No. 1.....	19	2	21
								Trip rider.....		2	2	Roslyn Fuel Co., No. 2.....	11	1	12
								Washer.....				Roslyn Fuel Co., No. 3.....	3		3
								Watchman.....		1	1	Roslyn Fuel Co., Summit.....	7	1	8
								Woodman.....		6	6	Sheldons.....	1		1
												Spicketon.....	1		1
												Sunset, National Coal Co.....	9	2	11
												Superior.....	3		3
												Taylor.....	2		2
												Wash. Anthracite Coal Co.....	5		5
													16		14
													2		2
													9		9
												Wilkeson, South 2.....	6		6
												Wilkeson, South 3.....	7		7
Totals.....	624	33	706		624	33	706		624	33	706		624	33	706

NEW EQUIPMENT AND DEVELOPMENT WORK FOR THE YEAR 1915.

KING COUNTY.

Carbon Coal and Clay Company, Bayne.

At Carbon mine, has driven 200 feet of gangway, 280 feet of slope and 390 feet of plane.

At Daly mine, has driven 50 feet of gangway and 530 feet of slope.

Denny-Renton Clay and Coal Company.

At Taylor mine, has driven 800 feet of gangway.

At Renton mine, has driven 1,150 feet of gangway in top bench.

Durham Colliery Company, Durham.

Has driven 450 feet of gangway, installed ventilating fan at mine No. 1 and opened seam No. 1 by drift.

Issaquah & Superior Coal Mining Company (Andrew Kennedy, Operator), Issaquah.

Has driven 964 feet of gangway and 140 feet of rock tunnel.

Northwestern Improvement Company, Ravensdale.

Has driven 174 feet of gangway and 412 feet of 10'x12' airway.

Has installed new 17"x24" Ball engine and double inlet Sirocco fan, capacity 150,000 cubic feet of air per minute against 3" water gauge. Same installed in reinforced concrete fan and engine house.

National Coal Company, Cumberland.

Has driven 300 feet of gangway and 500 feet of slope.

Has installed one ventilating fan and engine, one Ottumwa hoist, 25"x36"; one Montgomery jig washer; one bunker, 600 tons capacity, and two 100-horsepower boilers.

Pacific Coast Coal Company.

At mine No. 14, Black Diamond, has driven 640 feet of gangway.

At mine No. 11, Black Diamond, has driven 2,107 feet of gangway and installed new washery.

At Cannon mine, Franklin, has driven 40 feet of gangway. This mine was closed down in the month of April, 1915. The mine was left practically intact for future development and working.

At Ford mine, New Castle, has driven 2,431 feet of gangway.

Puget Sound Traction, Light & Power Company, Renton.

Has driven 2,301 feet of gangway and 3,080 feet of plane.

Pocahontas Coal and Coke Company, Palmer.

Has driven 150 feet of gangway on No. 2 seam and 500 feet of gangway on No. 3 seam.

No. 2 Tipple, Roslyn Fuel Company, near Ronald, Wash.

Trip Coming Out of No. 2 Mine, Roslyn Cascade Coal Co., Ronald, Wash.

(277)

KITTITAS COUNTY.

Northwestern Improvement Company.

At No. 6 mine, Roslyn, has driven 240 feet of rope-entry, 1,283 feet of entry and 627 feet of auxiliary slope. Has built 500 feet of snowsheds, reopened 1,000 feet of openings for manways and put in 2,800 feet of pipe for outside fire protection.

At No. 3 mine, Ronald, has driven 2,637 feet of entry and 351 feet of auxiliary slope. Has installed electric generator at mine and taken electric wiring out of fan shaft and carried it into mine via manway. Main slope has been extended 300 feet, and 481 feet of main return airway for slope driven. Overcast over slope and manways for west side air to return to fan shaft has been built. Sixteen hundred feet of rope entry reopened above water level. Water spraying system installed in slope workings. Slope manways were cleared of overcasts of no further service, and generally improved. Fourteen hundred feet of two-inch water pipe, water storage tank, fire-hydrants, etc., installed for outside fire protection. New man-cars built to eliminate use of coal-cars for men riding on slope.

At mine No. 5, Roslyn, has driven 4,325 feet of entry and installed new man-cars to eliminate use of coal-cars for men riding on slope.

At mine No. 7, Cle Elum, has driven 3,124 feet of entry and 501 feet of slope.

At Cle Elum mine, has driven 308 feet of entry.

Roslyn-Cascade Coal Company, Ronald.

Has driven 429 feet of entry at No. 1 mine, and 1,146 feet of entry and 694 feet of slope at No. 2 mine.

Roslyn Coal & Coke Company, Lakedale.

Has driven 150 feet of entry and 250 feet of slope. Has installed a blower fan and engine.

Roslyn Fuel Company.

At mine No. 1, Beekman, has driven 700 feet of rock slope to seam 400 feet under Roslyn seam, but the coal was unsatisfactory, so the work was abandoned.

At mine No. 2, Beekman, has driven 2,944 feet of entry and 2,917 feet of airway.

At Summit mine, Cle Elum, has driven 247 feet of entry, 227 feet of slope, 162 feet of slope airway and 21 feet of sump.

LEWIS COUNTY.

East Creek Coal Company, Ladd.

Mine was operated during year on a very small scale and employees were not confined to one occupation. Employed six to seven men only.

Empress Coal Company, Centralia.

Has driven 250 feet of entry.

Ford's Prairie Coal Company, Centralia.

Has driven 450 feet of entry.

Mendota Coal and Coke Company, Mendota.

Has driven 500 feet of gangway.

Sheldon Coal Company, Chehalis.

Has driven 400 feet of gangway.

Superior Coal Company, Chehalis.

Has driven 200 feet of gangway.

PIERCE COUNTY.**American Coal Company, Spiketon.**

Has driven 450 feet of gangway.

Carbon Hill Coal Company, Carbonado.

At Wingate mine, has driven 420 feet of gangway.

At Douty mine (No. 9 seam), has driven 200 feet of gangway.

At Miller mine, has driven 550 feet of gangway.

At No. 6 mine, has driven 200 feet of gangway and installed one Platt centrifugal pump, capacity 550 gallons per minute.

Gale Creek Coal Mines Company, Wilkeson.

Has driven 1,200 feet of gangway.

Northwestern Improvement Company, Melmont.

Mine was abandoned July, 1915.

Pacific Coast Coal Company, Burnett.

Has driven 979 feet of gangway.

Washington Manganese, Coal and Copper Company, Fairfax.

Has driven 948 feet of gangway and installed a settling tank, new coke bunkers for ovens, repaired old shipping bunkers, machinery and cars.

Wilkeson Coal and Coke Company, Wilkeson.

Has driven 1,550 feet of gangway and 100 feet of slope.

Has installed motors and electrical equipment to change to electrical power.

THURSTON COUNTY.**Washington Union Coal Company, Tono.**

Has driven 2,136 feet of gangway.

WHATCOM COUNTY.**Whatcom County Coal Company, Blue Canyon.**

Has driven 180 feet of gangway.

NAME OF COMPANY--HOME ADDRESS

Name of Mine	President	Manager	Mining Engineer
KING COUNTY--			
Black River Coal Company	R. D. Nichols	R. B. Heaston	Chas. Nelson
Carbon Coal and Clay Company, Bayne, Wash.	M. B. Daly	D. B. Hanley	Chas. Nelson
Carbon Coal and Clay Company, Bayne, Wash.	M. B. Daly	D. S. Hanley	
Denny-Ren	M. Thompson	J. F. Keenan	
Denny-Ren	M. Thompson	J. F. Keenan	
Durham C	O. R. Claghorn	O. R. Claghorn	
Isaquah	A. V. Alvensleben	F. A. Hill, Jr.	
Northwest	W. P. Clough	C. C. Andersen	
National C	Stephen H. Green	Stephen H. Green	
Pacific Coast Coal Company, Seattle, Wash.	J. C. Ford	William Hann	
Pacific Coast Coal Company, Seattle, Wash.	J. C. Ford	William Hann	
Pacific Coast Coal Company, Seattle, Wash.	J. C. Ford	William Hann	
Pacific Coast Coal Company, Seattle, Wash.	J. C. Ford	William Hann	
Puget Sound Traction, Light and Power Company, Seattle, Wash.	A. W. Leonard	A. I. Kempster	
Pocahontas Coal and Coke Company, Seattle, Wash.	J. R. Miller	M. E. Barham	
Seranton Coal Company, Tacoma, Wash.	E. Hutchison	Wm. J. Wood	
KITTITAS COUNTY			
Northwestern Improvement Company, Tacoma, Wash.	W. P. Clough	C. C. Andersen	George Belg
Northwestern Improvement Company, Tacoma, Wash.	W. P. Clough	C. C. Andersen	George Belg
Northwestern Improvement Company, Tacoma, Wash.	W. P. Clough	C. C. Andersen	George Belg
Northwestern Improvement Company, Tacoma, Wash.	W. P. Clough	C. C. Andersen	George Belg
Northwestern Improvement Company, Tacoma, Wash.	W. P. Clough	C. C. Andersen	George Belg
Roslyn Fuel Company, Seattle, Wash.	Prescott Oakes	C. E. Jones	Fred Bianco
Roslyn Fuel Company, Seattle, Wash.	Prescott Oakes	C. E. Jones	Fred Bianco
Roslyn Fuel Company, Seattle, Wash.	Prescott Oakes	C. E. Jones	Robt. Scoble, Jr.
Roslyn Cascade Coal Company, Roslyn, Wash.	F. P. Larrabee	Wm. Mackay	J. K. Ash
Roslyn Cascade Coal Company, Roslyn, Wash.	F. P. Larrabee	Wm. Mackay	J. E. Ash
Roslyn Coal and Coke Company, Roslyn, Wash.	G. H. Reed	A. F. Plant	
T. B. Wright & Sons, Roslyn, Wash.	T. B. Wright		

Operating Companies With Names of Officers and Mining Engineers for the Year 1915.—Concluded.

NAME OF COMPANY—HOME ADDRESS	Name of Mine	President	Manager	Mining Engineer
LEWIS COUNTY—				
East Creek Coal Company, Tacoma, Wash.	Ladd.....	John Bagley.....	M. L. McGraw.....	
Empress Coal Company, Centralla, Wash.	Empress No. 2.....	A. D. Foron.....	B. H. Johnston.....	F. C. Knowles
Fords Prairie Coal Company, Centralla, Wash.	Fords Prairie.....	C. P. Olsen.....	J. G. Kriebel.....	
Mendota Coal and Coke Company, Centralla, Wash.	Mendota.....	W. E. Williams.....	W. E. Williams.....	
Monarch Coal Company, Kopiah, Wash.	Monarch.....	J. E. Murphy.....	Chas. Johnson.....	
Pennsylvania Coal Company, Mineral, Wash.	Divide.....	W. D. Sheldon.....	W. F. West.....	
Superior Coal Company, Chehalis, Wash.	No. 2.....			
Sheldon Coal Company, Chehalis, Wash.	Sheldon.....			
PIERCE COUNTY—				
American Coal Company, Spiketon, Wash.	No. 10.....	W. V. Rinehart.....	L. U. V. Bean.....	John Harvey
Carbon Hill Coal Company, Carbonado, Wash.	Wingate.....	W. H. Crocker.....	J. F. Menzies.....	John Harvey
Carbon Hill Coal Company, Carbonado, Wash.	Douty.....	W. H. Crocker.....	J. F. Menzies.....	John Harvey
Carbon Hill Coal Company, Carbonado, Wash.	Miller.....	W. H. Crocker.....	J. F. Menzies.....	John Harvey
Carbon Hill Coal Company, Carbonado, Wash.	Electric Slope.....	W. H. Crocker.....	J. F. Menzies.....	John Harvey
Carbon Hill Coal Company, Carbonado, Wash.	No. 6.....	W. H. Crocker.....	J. F. Menzies.....	John Harvey
The Fairfax Mine, Inc., Carbonado, Wash.	No. 9.....	W. H. Crocker.....	J. F. Menzies.....	Harry Boyle
Gale Creek Coal Mine, Inc., Carbonado, Wash.	Fairfax.....	W. R. Rust.....	J. J. Hewitt.....	
Northwestern Improvement Company, Tacoma, Wash.	Gale Creek.....	Henry Hewitt, Jr.....	O. C. Andersen.....	N. D. Moore
Pacific Coast Coal Company, Black Diamond, Wash.	Melmont.....	W. P. Clogh.....	William Hann.....	
South Willis Coal Company, Wilkeson, Wash.	Burnett.....	J. C. Ford.....	Frank Merritt.....	
Wilkeson Coal and Coke Company, Tacoma, Wash.	South Willis.....	Abbe Morris.....	J. H. Scott.....	
Washington Manganese, Coal and Copper Company, Seattle, Wash.	Wilkeson.....	Henry Hewitt, Jr.....	W. H. Rowe.....	
THURSTON COUNTY—				
Washington Union Coal Company, Tozo, Wash.	Montezuma.....	H. O. Marcy.....		
WHEATCORN COUNTY—				
Washington Union Coal Company, Tozo, Wash.	Hanniford.....	F. A. Manley.....		R. B. Ober
Wheatcom County Coal Company, E. F. D. No. 3, Bellingham, Wash.	Blue Canyon.....	R. O. Olise.....		

OPERATING COMPANIES WITH NAMES OF SUPERINTENDENTS AND FOREMEN FOR THE YEAR 1918.

NAME OF COMPANY HOME ADDRESS	Superintendent	Mine Foreman	Outside Foreman	P. O. Address - Mine
KING COUNTY				
Black River Coal Company	And. Collum	Henry Gunnell		Farlington, Wash.
Carbon Coal and Clay Company, Bayne, Wash.	And. Collum	Henry Gunnell		Bayne, Wash.
Carbon Coal and Clay Company, Bayne, Wash.	Wm. Lawton			Bayne, Wash.
Denny-Renton Clay and Coal Company, Seattle	J. E. Kendtner			Taylor, Wash.
Denny-Renton Clay and Coal Company, Seattle	J. A. Williams		Joe Bennett	Renton, Wash.
	L. J. Harris		Mandrick Crossley	Durham, Wash.
	R. D. Scott		C. H. Lewis	Issaquah, Wash.
	Edwin Husband		J. D. Armstrong	Ravensdale, Wash.
	R. Christensen		M. F. Baesinger	Cumberland, Wash.
	R. Christensen		Ben Allen	Black Diamond, Wash.
	R. Christensen		Joseph Upton	Black Diamond, Wash.
	J. J. Jones			Franklin, Wash.
Pacific Coast Coal Company, Seattle, Wash.			S. M. Peterson	New Castle, Wash.
Pacific Coast Coal Company, Seattle, Wash.			D. C. Williams	Renton, Wash.
Puget Sound Traction, Light and Power Company, Seattle, Wash.	L. D. Jones			Palmer, Wash.
Pocahontas Coal and Coke Company, Seattle, Wash.	B. H. Meyers			Cumberland, Wash.
Scranton Coal Company, Tacoma, Wash.	D. W. Watkins			
KITITAS COUNTY				
Northwestern Improvement Company, Tacoma, Wash.	Peter Bagley	Thos. Ramsey & Ed. Richards	Robt. Maxwell	Roslyn, Wash.
Northwestern Improvement Company, Tacoma, Wash.	Peter Bagley	Walter Snedden	Wm. Parry	Roslyn, Wash.
Northwestern Improvement Company, Tacoma, Wash.	Peter Bagley	George Morris	W. J. Thompson	Roslyn, Wash.
Northwestern Improvement Company, Tacoma, Wash.	Arthur Hodder	James Pascoe	Casper Koester	Cle Elum, Wash.
Northwestern Improvement Company, Tacoma, Wash.	Arthur Hodder	Fred Smith	E. L. Lanigan	Cle Elum, Wash.
Roslyn Fuel Company, Seattle, Wash.	C. E. Jones	William Shaw	Harry Mounsey	Roslyn, Wash.
Roslyn Fuel Company, Seattle, Wash.	C. E. Jones	D. S. Bowle	Harry Mounsey	Roslyn, Wash.
Roslyn Fuel Company, Seattle, Wash.	Robt. Scoble, Jr.			Cle Elum, Wash.
Roslyn Cascade Coal Company, Roslyn, Wash.	Wm. Mackay	Robt. Scoble, Sr.		Roslyn, Wash.
Roslyn Cascade Coal Company, Roslyn, Wash.	Wm. Mackay	James Ash		Roslyn, Wash.
Roslyn Coal and Coke Company, Roslyn, Wash.	A. F. Plant	Joe Oerne		Roslyn, Wash.
T. B. Wright & Sons, Roslyn, Wash.	T. B. Wright	Peter Birchall		Roslyn, Wash.

Operating Companies With Names of Superintendents and Foremen for the Year 1915.—Concluded.

NAME OF COMPANY—HOME ADDRESS	Superintendent	Mine Foreman	Outside Foreman	P. O. Address—Mine
LEWIS COUNTY				
East Creek Coal Company, Tacoma, Wash.	E. H. Morgan	John Meeko		Ladd, Wash.
Empress Coal Company, Centralia, Wash.		E. H. Morgan		Centralia, Wash.
Forde Prairie Coal Company, Centralia, Wash.		R. Tarrach		Centralia, Wash.
Mendota Coal and Coke Company, Centralia, Wash.	J. G. McMullen	J. G. McMullen	Harmer Johnston	Mendota, Wash.
Monarch Coal Company, Kopiah, Wash.		J. G. Kriebel		Kopiah, Wash.
Pennsylvania Coal Company, Mineral, Wash.		Wm. Bevan		Mineral, Wash.
Superior Coal Company, Chehalis, Wash.	Matt Parker	Matt Parker		Chehalis, Wash.
Sheldon Coal Company, Chehalis, Wash.	B. H. Taylor	B. H. Taylor		Chehalis, Wash.
PIERCE COUNTY				
American Coal Company, Spiketon, Wash.	Frank Merritt	Erick Jackson		Spiketon, Wash.
Carbon Hill Coal Company, Carbonado, Wash.	Frank Good	Fred Jarrett	Chas. Skedgel	Carbonado, Wash.
Carbon Hill Coal Company, Carbonado, Wash.	Frank Good	D. E. Roberts	Chas. Skedgel	Carbonado, Wash.
Carbon Hill Coal Company, Carbonado, Wash.	Frank Good	Joseph Foster	Chas. Skedgel	Carbonado, Wash.
Carbon Hill Coal Company, Carbonado, Wash.	Frank Good	George Love	Chas. Skedgel	Carbonado, Wash.
Carbon Hill Coal Company, Carbonado, Wash.	Frank Good	Owen Roberts	Chas. Skedgel	Carbonado, Wash.
Carbon Hill Coal Company, Carbonado, Wash.	Frank Good	Evan Jones	Chas. Skedgel	Carbonado, Wash.
The Fairfax Mine, Inc.	G. E. Rockefeller	G. E. Rockefeller	Matt Jones	Fairfax, Wash.
Gale Creek Coal Mines Company	J. T. Lee	Robert Cox	R. O. Albertson	Wilkeson, Wash.
Northwestern Improvement Company, Tacoma, Wash.	J. W. McDowell	John Sivo		Melmont, Wash.
Pacific Coast Coal Company, Black Diamond, Wash.	W. E. Maltby	Arthur Jones	Martin Swinland	Burnett, Wash.
Black Hill Coal Company	J. T. Lee	Jonas Morris		Wilkeson, Wash.
Wash. Coal & Coke Co., Seattle, Wash.	George Savage	Abg Morris		Wilkeson, Wash.
		J. J. Wilson	F. B. Sample	Fairfax, Wash.
THURSTON COUNTY				
Washington Union Coal Company, Tono, Wash.	E. S. Brooks	Charles Friend	H. A. Wylan	Tono, Wash.
WHATCOM COUNTY				
Whatcom County Coal Company, R. F. D. No. 3, Bellingham, Wash.	Andrew Eckland			Park, Wash.

**Coal Mine Statistics for the
Year 1916.**

SUMMARY.

The Following Summary for the Years Ending December 31, 1915, and 1916, is Here Presented.

SUMMARY	1915	1916
Number of counties producing coal.....	6	6
Number of mines and openings of all kinds.....	58	56
New mines or old mines reopened during the year.....	3	8
Mines closed, abandoned, or not heard from since last report.....	3	11
Total production of coal (short tons).....	2,409,331	3,019,600
Total value of coal at mine.....	\$5,398,624	\$7,155,317
Average value of coal at mine, per short ton.....	\$2.24	\$2.37
Total production of coke at mine, short tons.....	88,605	93,722
Total value of coke at mine.....	\$471,752	\$487,210
Average value of coke at mine, per short ton.....	\$5.32	\$5.20
Total number of inside employees.....	3,683	3,503
Total number of outside employees (including coke workers).....	1,145	1,150
Total number of employees.....	4,828	4,746
Average number of days operated.....	165	212
Yearly production per employe (short tons).....	498	638
Daily average short tons per employe.....	3.01	2.91
Number of men accidently killed, inside.....	42	20
Number of men accidently killed, outside.....	3	1
Total number of men accidently killed.....	45	21
Number of widows.....	28	15
Number of orphans.....	59	48
Number of tons mined to each life lost.....	53,540	148,280
Number of lives lost per 1,000 employes, inside.....	11.40	5.58
Number of lives lost per 1,000 employes, inside and outside..	9.32	4.42
Number of non-fatal accidents, inside.....	624	917
Number of non-fatal accidents, outside.....	82	118
Total number of non-fatal accidents.....	706	1,035
Number of tons mined per non-fatal accident, inside.....	3,361	2,295
Number of tons mined per non-fatal accident, outside.....	29,832	25,590
Tons mined per non-fatal accident, inside and outside.....	3,413	2,913
Number of non-fatal accidents per 1,000 employes, inside.....	109.4	255.0
Number of non-fatal accidents per 1,000 employes, outside.....	71.6	102.6
Non-fatal accidents per 1,000 employes, inside and outside.....	146.2	218.1
Number of injured returned to work, inside and outside.....	608	874
Time loss of injured returned to work, days.....	18,184	20,274
Average time loss of injured returned to work, days.....	26.05	23.19

PRODUCTION OF COKE BY COUNTIES.

COUNTY	1915	1916
Pierce	88,605	93,722

PRODUCTION OF COAL BY COUNTIES, 1915.

COUNTY	Tons of Coal Shipped	Sold to Local Trade	Used for Power	Charged Into Coke Ovens	Total Coal Production	Total Value	Average Value Per Ton at Mine	Average Number of Days Operated	Average Number of Employees
King	703,035	15,900	62,002	.....	844,936	\$1,751,657	\$2 07	155	1,359
Kittitas	880,851	13,854	34,307	.....	879,032	2,044,031	2 33	127	1,534
Lewis	62,489	11,305	4,464	.....	78,259	132,915	1 70	138	133
Pierce	227,039	3,630	20,227	.....	455,693	1,251,708	2 56	235	1,179
Thurston	107,776	978	3,742	.....	112,003	213,218	1 80	157	194
Whatcom	6,255	.....	.....	.....	6,255	.....	.....	222	19
The State.....	2,038,535	43,037	125,432	.....	2,409,331	\$5,308,524	\$2 24	165	4,338

* 3,512 tons purchased and charged into coke ovens at Fairfax. This coal is included in coal shipped from the other mines.

PRODUCTION OF COAL BY COUNTIES, 1916.

COUNTY	Tons of Coal Shipped	Sold to Local Trade	Used for Power	Charged Into Coke Ovens	Total Coal Production	Total Value	Average Value Per Ton at Mine	Average Number of Days Operated	Average Number of Employees
King	807,070	16,902	65,267	.....	889,275	\$2,226,083	\$2 54	169	1,705
Kittitas	1,251,628	20,070	45,295	.....	1,316,993	3,064,276	2 38	224	1,513
Lewis	89,215	14,325	5,631	.....	109,121	185,286	1 79	137	147
Pierce	276,354	4,003	8,059	.....	563,102	1,307,316	2 55	251	1,179
Thurston	159,740	1,030	4,245	.....	165,003	271,357	1 59	199	193
Whatcom	5,935	.....	.....	.....	5,935	.....	.....	239	14
The State.....	2,639,995	57,013	129,345	.....	3,019,000	\$7,155,317	\$2 37	213	4,740

† 7,431 tons purchased and charged into coke ovens at Fairfax. This coal is included in coal shipped from the other mines.

COAL MINING STATISTICS FOR THE YEAR 1916.

NAME OF MINE	No. of Mines	Name of Mine	Town	County	Tons of Coal Shipped	Sold to Em- ployes and Local Trade	Used for Power	Charged Into Coke Ovens	Total Coal Pro- duction	Total Coke Pro- duction	Days Oper- ated	Inside Em- ployes	Out- side Em- ployes
Andrew Kennedy*	1	Grand Ridge.	Isaqua.	King.	23,738	359	.....	.....	24,097	.....	134	60	19
Carbon Coal & Clay Company	2	Carbon & Day	Bayne.	King.	51,906	387	6,528	.....	58,434	.....	302	62	19
Penny-Renton Clay & Coal Company	2	Nos. 1 and 2.	Taylor.	King.	4,223	368	16,306	.....	20,529	.....	172	26	5
Denny-Renton	1	Denny-Renton	Renton.	King.	.....	7,460	.....	.....	7,460	.....	297	10	1
Durham Colliery Company	1	Nos. 1 and 2.	Durham.	King.	39,213	94	881	.....	39,894	.....	232	37	15
Hyde Coal Company	1	Hyde.	Cumberland.	King.	15,529	82	985	.....	16,514	.....	202	30	19
Isaqua & Superior Coal M. Co.*	1	Isaqua.	Isaqua.	King.	42,240	271	.....	.....	42,511	.....	104	107	32
National Coal Company	2	Nos. 1 and 3.	Cumberland.	King.	12,909	160	1,731	.....	14,640	.....	262	19	19
Ozark Coal Company	1	Navy.	Cumberland.	King.	5,610	22	206	.....	5,816	.....	109	20	10
Pacific Coast Coal Company	1	No. 14.	Black Diamond.	King.	2,877	71	200	.....	3,077	.....	9	151	47
Pacific Coast Coal Company	1	No. 11.	Black Diamond.	King.	188,481	2,499	5,995	.....	206,975	.....	221	324	149
Pacific Coast Coal Company	1	Ford.	New Castle.	King.	278,703	1,043	21,817	.....	301,520	.....	259	206	149
Pocahontas Coal & Coke Company.	1	Pocahontas.	Palmer.	King.	10,873	80	21,670	.....	11,653	.....	193	21	17
Puget Sound Traction, Light & Power Company	1	Renton.	Renton.	King.	120,874	4,061	10,248	.....	135,203	.....	255	182	48
Totals	13				807,076	16,982	65,267	.....	889,275	.....	2,666	1,293	502
Independent Coal & Coke Company.	1	No. 1.	Cle Elum.	Kittitas.	6,486	.....	775	.....	7,261	.....	55	66	15
Northwestern Improvement Co.	1	No. 6.	Roslyn.	Kittitas.	218,508	8,172	14,981	.....	241,489	.....	251	205	27
Northwestern Improvement Co.	1	No. 3.	Ronald.	Kittitas.	296,534	853	6,130	.....	243,507	.....	249	240	20
Northwestern Improvement Co.	1	No. 5.	Roslyn.	Kittitas.	153,177	237	5,317	.....	158,494	.....	230	160	25
Northwestern Improvement Co.	1	No. 7.	Cle Elum.	Kittitas.	187,203	1,466	6,272	.....	193,475	.....	245	188	24
Northwestern Improvement Co.	1	Cle Elum.	Cle Elum.	Kittitas.	132,446	4,045	477	.....	136,993	.....	245	177	21
Roslyn Cascade Coal Company.	2	Nos. 1 and 2.	Ronald.	Kittitas.	64,704	1,019	1,934	.....	67,017	.....	212	74	12
Roslyn Coal & Coke Company.	1	Plant.	Ronald.	Kittitas.	6,408	.....	265	.....	7,173	.....	184	17	6
Roslyn Fuel Company.	1	No. 1.	Beaman.	Kittitas.	112,850	1,190	7,363	.....	122,003	.....	207	94	19
Roslyn Fuel Company.	1	No. 2.	Beaman.	Kittitas.	114,753	288	1,400	.....	116,624	.....	225	92	13
Roslyn Fuel Company.	1	Summit.	Cle Elum.	Kittitas.	17,813	2,466	460	.....	20,738	.....	142	46	11
T. B. Wright & Sons	1	No. 1.	Lakeview.	Kittitas.	17,813	2,466	460	.....	20,738	.....	142	46	11
Totals	13				1,251,698	30,070	45,296	.....	1,316,993	.....	2,244	1,311	202

* Formerly Central Coal Company. ** Operated three months by Andrew Kennedy and three months by the King Coal Mining Company.

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NAME OF MINE	No. of Mines	Name of Mine	Town	County	Tons of Coal Shipped	Sold to Employees and Local Trade	Used for Power	Charged Into Coke Ovens	Total Coal Production	Total Coke Production	Days Operated	Inside Employees	Outside Employees
Centralia Coal Mining Company.....	1	Empress...	Centralia.	Lewis.....	8,141	.....	484	.....	9,625	.....	186	14	4
East Creek Coal Company.....	1	No. 2.....	Ladd	Lewis.....	4,821	.....	.....	.....	4,821	.....	300	4	2
Ford's Prairie Coal Company.....	1	Ford's Prairie..	Centralia..	Lewis.....	7,943	1,164	1,110	.....	10,207	.....	188	12	4
Free Burning Coal Company.....	1	.....	Packwood	Lewis.....	1,864	.....	.....	.....	1,864	.....	.....	.....	.....
Mendota Coal & Coke Company.....	1	No. 1.....	Mendota...	Lewis.....	48,098	206	2,629	.....	50,935	.....	181	53	9
Monarch Coal Company.....	1	No. 1.....	Koplah ..	Lewis.....	4,978	.....	111	.....	5,089	.....	151	5	1
Sheldon Coal Company.....	1	Sheldons.....	Chehalis..	Lewis.....	5,983	7,878	516	.....	14,377	.....	25	15	3
Salzer Valley Coal Company.....	1	Salzer Valley..	Centralia	Lewis.....	1,600	.....	100	.....	1,700	.....	12	2	2
Superior Coal Company.....	1	No. 2.....	Chehalis	Lewis.....	6,087	5,035	681	.....	11,753	.....	261	13	4
Totals.....	9	.....	.....	.....	89,215	14,325	5,881	.....	109,121	.....	1,885	118	29
Carbon Hill Coal Company.....	6	Carbonado...	Carbonado..	Pierce.....	190,781	2,224	6,454	43,605	249,124	27,409	279	233	166
Gale Creek Coal Mines Company.....	1	Gale Creek...	Wilkeson ..	Pierce.....	31,446	572	.....	.....	32,018	.....	22	53	10
Pacific Coast Coal Company.....	1	Burnett.....	Burnett ..	Pierce.....	98,938	1,384	300	.....	96,822	.....	239	155	50
South Willis Coal Company.....	1	No. 10	Spiketon...	Pierce.....	26,727	5	1,045	.....	28,417	.....	15	41	14
South Willis Coal Company.....	1	Champion...	Wilkeson ..	Pierce.....	3,729	15	380	.....	4,104	.....	68	19	10
The Fairfax Mine Incorporated.....	1	Fairfax.....	Fairfax ..	Pierce.....	.....	70	.....	\$ 23,403	16,108	15,151	511	48	22
Washington Manganesse, Coal & Copper Company.....	1	Marcy.....	Fairfax...	Pierce.....	.....	.....	.....	4,212	4,212	2,635	31	37	35
Wilkeson Coal & Coke Company.....	1	Wilkeson.....	Wilkeson....	Pierce.....	23,733	290	.....	79,334	108,357	49,527	282	110	73
Totals.....	.....	.....	.....	.....	376,354	4,606	8,969	\$150,674	589,162	93,722	1,062	799	260
Washington Union Coal Company ..	.....	Tono No. 1....	Tono.....	Thurston ..	159,740	1,050	4,246	.....	165,006	.....	191	98	36
Totals.....	.....	.....	.....	.....	159,740	1,050	4,246	.....	165,006	.....	191	98	36
Whatcom County Coal Company.....	.....	Blue Canyon..	Parke.....	Whatcom....	5,983	.....	.....	.....	5,983	.....	289	12	2
Totals.....	.....	.....	.....	.....	5,983	.....	.....	.....	5,983	.....	289	12	2
Grand Totals	59	.....	.....	.....	2,659,996	37,013	129,946	\$150,674	3,019,600	98,722	3,645	3,526	1,150

† Less than ten men employed and no other data available. ‡ Formerly The American Coal Company. § 7,431 tons purchased from other mines and charged into the ovens at Fairfax.

Table Showing Number of Days Operated,* Total Number of Employees Per Mine, Short Tons Per Mine Per Year, Average Short Tons Per Mine Per Day, Average Short Tons Per Employee Per Year, Average Short Tons Per Employee Per Day, at Each Mine, 1916.

NAME OF COMPANY	County	Average Days Operated	Total Number of Employees Per Mine†	Short Tons Per Mine Per Year	Average Short Tons Per Mine Per Day	Average Short Tons Per Employee Per Year	Average Short Tons Per Employee Per Day
Andrew Kennedy Company—Grand Ridge Mine.....	King.....	124	79	24,097	180	305	2.28
Black River Coal Company.....	King.....	302	81	58,971	194	724	2.40
Carbon Coal and Clay Company—Bayne Mines†.....	King.....	173	31	20,832	121	673	2.91
Denny-Renton Clay and Coal Company—Taylor†.....	King.....	297	11	7,439	25	680	2.29
Denny-Renton Clay and Coal Company—Renton.....	King.....	223	54	29,888	172	788	2.18
Durham Colliery Company†.....	King.....	117	56	16,506	143	290	2.53
Hyde Coal Company.....	King.....	104	139	42,511	409	306	2.94
Issaquah and Superior Coal Mining Company.....	King.....	202	38	14,800	56	289	1.49
National Coal Company†.....	King.....	109	30	5,888	64	195	1.79
Ozark Coal Company Navy Mine.....	King.....	9	193	8,149	230	16	1.77
Pacific Coast Coal Company—Mine No. 14—Black Diamond.....	King.....	221	426	208,975	946	486	2.16
Pacific Coast Coal Company Mine No. 11—Black Diamond.....	King.....	259	354	321,553	1,164	852	2.29
Pacific Coast Coal Company—Ford Mine—New Castle.....	King.....	108	38	11,923	60	306	1.58
Pacabontas Coal and Coke Company.....	King.....	255	230	136,308	530	538	2.31
Puget Sound Traction, Light and Power Company—Renton Mine.....	King.....						
The County.....							
		• 135	1,795	889,276	366	504	2.59
Northwestern Improvement Company—No. 6.....	Kittitas.....	251	232	241,611	909	1,041	4.15
Northwestern Improvement Company—No. 8.....	Kittitas.....	249	209	243,507	973	906	3.64
Northwestern Improvement Company—No. 5.....	Kittitas.....	230	185	158,681	680	858	3.73
Northwestern Improvement Company—No. 7.....	Kittitas.....	246	212	195,141	798	930	3.74
Northwestern Improvement Company—Ole Elum Mine.....	Kittitas.....	255	148	136,939	537	925	3.63
and 2†.....	Kittitas.....	212	80	67,017	316	779	3.67
Baslyn Mine.....	Kittitas.....	134	92	7,178	58	238	2.43
Baslyn.....	Kittitas.....	207	113	122,008	599	1,079	3.52
Baslyn.....	Kittitas.....	226	105	116,524	519	1,110	4.93
Baslyn Fuel Company—Summit.....	Kittitas.....	142	57	20,788	146	305	2.67
Independent Coal and Coke Company§.....	Kittitas.....	56	80	7,271	122	91	1.66
T. B. Wright & Sons.....	Kittitas.....	33	4	304	3	76	2.00
The County.....							
		• 234	1,518	1,316,938	490	870	2.38

Table Showing Number of Days Operated,* Total Number of Employees Per Mine, Short Tons Per Mine Per Year, Average Short Tons Per Mine Per Day, Average Short Tons Per Employee Per Year, Average Short Tons Per Employee Per Day, at Each Mine, 1916.—Concluded.

NAME OF COMPANY	County	Average Days Operated	Total Number of Employees	Short Tons Per Mine Per Year	Average Short Tons Per Mine Per Day	Average Short Tons Per Employee Per Year	Average Short Tons Per Employee Per Day
Centralia Coal Mining Company—Empress	Lewis	186	18	8,825	68	479	8.52
East Creek Coal Company—Ladd Mine No. 3	Lewis	300	6	4,821	15	784	2.51
Fords Prairie Coal Company	Lewis	183	16	10,307	54	656	8.39
Free Burning Coal Company	Lewis			1,864			
Mendota Coal and Coke Company	Lewis	150	64	50,855	321	797	5.01
Monarch Coal Company	Lewis	180	6	5,089	24	848	5.65
Sheldon Coal Company	Lewis	238	16	14,377	56	899	8.48
Salzer Valley Coal Company	Lewis	125	4	1,700	14	425	8.40
Superior Coal Company	Lewis	260	17	11,738	44	691	8.57
The County		* 197	147	109,171	72	780	8.39
Carbon Hill	Pierce	279	409	249,124	893	499	1.79
Gale Creek O	Pierce	232	66	32,018	136	485	2.09
Pacific Coast	Pierce	232	206	95,822	390	467	1.85
South Willis	Pierce	68	29	4,104	60	142	2.03
South Willis	Pierce	158	55	28,417	180	517	3.27
The Fairfax	Pierce	311	70	16,108	51	230	0.74
Washington	Pierce	80	72	4,212	58	53	0.73
Wilkeson Cos	Pierce	238	183	108,397	306	564	2.06
The County		* 251	1,179	528,162	266	482	1.80
Washington Union Coal Company—Tono No. 1	Thurston	199	128	165,085	839	1,239	6.48
The County		199	128	165,085	839	1,239	6.48
Whatcom County Coal Company—Blue Canyon	Whatcom	280	14	5,988	21	427	1.48
The County		280	14	5,988	21	427	1.48
The State		* 213	4,746	3,019,630	814	636	2.91

* Found by dividing the sum of the products of the total number of men employed and days worked at each mine by the total number of men employed. † Does not include office workers. Includes coke oven workers. ‡ All mines.

Table Showing Average Days Worked,* Number of Men Employed, and Daily Output in Short Tons Per Employee,
By Counties, For the Years 1905-1916.

YEAR	KING COUNTY			KITITAS COUNTY			OLALLAM COUNTY			LEWIS COUNTY			PIERCE COUNTY		
	Average Days Worked	Average Number of Men	Daily Output per Man	Average Days Worked	Average Number of Men	Daily Output per Man	Average Days Worked	Average Number of Men	Daily Output per Man	Average Days Worked	Average Number of Men	Daily Output per Man	Average Days Worked	Average Number of Men	Daily Output per Man
1905...	250	1,701	2.53	216	2,843	2.53	...	...	...	254	44	0.40	268	841	2.02
1906 +	264	1,787	2.82	247	2,244	2.57	...	...	...	312	116	1.09	271	1,003	1.78
1907...	282	1,971	2.97	268	2,425	2.84	125	...	...	255	190	2.09	276	1,383	1.67
1908...	258	1,663	2.47	197	2,127	3.48	280	19	0.84	169	173	1.99	244	1,325	1.60
1909...	273	1,733	2.51	205	2,222	3.40	306	32	-0.23	242	205	2.04	263	1,322	1.60
1910...	270	1,623	2.89	242	2,185	3.13	77	7	1.29	236	261	2.53	272	1,854	1.73
1911...	262	1,800	2.69	189	1,867	3.53	...	...	...	212	273	2.74	273	1,497	1.91
1912...	239	2,025	2.39	202	1,743	3.50	...	...	...	184	280	2.49	266	1,434	2.15
1913...	260	2,417	2.16	229	1,884	3.07	...	...	...	190	282	2.82	276	1,365	1.90
1914...	187	2,856	2.86	196	1,683	3.76	...	...	...	115	220	3.45	282	1,240	1.78
1915...	185	1,869	2.91	127	1,894	4.51	...	...	...	139	183	4.16	285	1,179	1.77
1916...	195	1,765	2.50	224	1,513	3.88	...	...	...	187	147	3.89	251	1,179	1.80

* The sum of the average number of employees at each mine is considered the total for each county and the State as the case may be. The average number of days the total number of men were at work in the county or State is found by dividing the sum of the products of the total number of men employed and days worked at each mine by the total number of men employed. The difference between the average number of days the total number of men were at work, and consequently the daily output per employee, in the above table and those of the previous reports for the same years is due to a difference in the method of calculating same.

† Forty-four men inside and thirty-three outside at the Great Western Coal and Development Company's mine, Tenino, Thurston county, for the year 1906. Wilkeson Coal and Coke Company mined 25,161 tons and worked $\frac{7}{16}$ days during last three months of 1906.

Table Showing Average Days Worked,* Number of Men Employed, and Daily Output in Short Tons Per Employee, By Counties, For the Years 1905-1916.—Concluded.

YEAR	COWLITZ COUNTY			THURSTON COUNTY			WHATOOM COUNTY			THE STATE			
	Average Days Worked	Average Number of Men	Daily Output per Man	Average Days Worked	Average Number of Men	Daily Output per Man	Average Days Worked	Average Number of Men	Daily Output per Man	Average Days Worked	Average Number of Men	Daily Output per Man	Shifts (Men-days)
1905.....	130	47	1.37	.....	.....	.....	236	4,976	2.43	1,173,757
1906 †.....	108	77	1.63	.....	.....	.....	257	5,227	2.45	1,341,108
1907.....	20	.....	185	142	1.28	.....	.....	.....	270	6,113	2.26	1,648,819
1908.....	109	74	1.98	.....	.....	.....	218	5,341	2.56	1,161,973
1909.....	142	132	4.85	.....	.....	.....	247	5,725	2.54	1,412,573
1910.....	163	47	3.91	.....	.....	.....	264	6,121	2.46	1,619,142
1911.....	196	109	4.39	.....	.....	.....	234	5,781	2.62	1,355,692
1912.....	220	168	3.69	.....	.....	.....	225	5,673	2.62	1,277,423
1913.....	203	172	4.39	.....	.....	.....	251	6,065	2.52	1,521,199
1914.....	153	130	5.64	.....	.....	.....	200	5,647	2.69	1,131,980
1915.....	157	104	6.86	.....	.....	.....	165	4,821	3.01	798,786
1916.....	199	128	6.48	.....	.....	.....	218	4,746	2.91	1,085,546

* The sum of the average number of employees at each mine is considered the total for each county and the State as the case may be. The average number of days the total number of men were at work in the county or State is found by dividing the sum of the products of the total number of men employed and days worked at each mine by the total number of men employed. The difference between the average number of days the total number of men were at work, and consequently the daily output per employee, in the above table and those of the previous reports for the same years is due to a difference in the method of calculating same.

† Forty-four men inside and thirty-three outside at the Great Western Coal and Development Company's mine, Tenino, Thurston county, for the year 1906. Wilkeson Coal and Coke Company mined 25,161 tons and worked 75 days during last three months of 1906.

IMPORTS OF COAL AND COKE IN LONG TONS INTO THE PORT OF SEATTLE.*

YEAR	COAL FROM								COKE FROM							
	ALASKA		NEW YORK		BALTIMORE		BRITISH COLUMBIA		AUSTRALIA		TOTAL		ENGLAND		TOTAL	
	Ton-nage	Value	Ton-nage	Value	Ton-nage	Value	Ton-nage	Value	Ton-nage	Value	Ton-nage	Value	Ton-nage	Value	Ton-nage	Value
1913.....					4,202	\$93,987	24,559	\$95,005	1,605	\$4,198	30,368	\$103,190				
1914.....	473	\$5,889	4,730	\$14,190			45,113	209,009			50,316	226,068				
1915.....			2,809	8,158	10,139	28,759	80,469	336,779	414	2,900	98,831	306,506	1,605	\$11,950	1,605	\$11,950
1916.....					2,911	9,583	155,129	650,842			168,040	660,375				

* Compiled from reports of State Mine Inspectors and Port Wardens, Port of Seattle.

EXPORTS OF COAL AND COKE IN LONG TONS FROM THE PORT OF SEATTLE.*

YEAR	COAL TO											
	COASTWISE POINTS		LOCAL POINTS		HAWAIIAN ISLANDS		ALASKA		BERING SEA		CANADA	
	Tonnage	Value	Tonnage	Value	Tonnage	Value	Tonnage	Value	Tonnage	Value	Tonnage	Value
1907.....												
1908.....	232,005	\$1,021,316										
1909.....	496,637	1,070,865	58,924	\$302,159	129	\$478	17,854	\$73,063	5,880	\$20,877	250	\$5,725
1910.....	581,129	1,216,632	12,891	67,512	455	2,881	16,851	87,845	4,049	13,708	569	5,890
1911.....	591,402	1,256,682	12,891	67,512	455	2,881	16,851	87,845	10,880	40,869	733	6,373
1912.....	58,612	125,853	25,853	13,350	1,350	2,881	23,798	100,562	2,562	12,928	8,138	38,495
1913.....	58,612	125,853	25,853	13,350	1,350	2,881	23,798	100,562	2,562	12,928	8,138	38,495
1914.....	15,357	67,141	4,414	21,165	3,748	2,881	40,704	182,845	4,314	25,305	125,791	458,887
1915.....	8,049	18,335			8,748	2,881	46,089	206,430	1,062	13,981	85,659	144,700
1916.....	20,792	74,082	588	2,468	1,297	2,881	46,189	221,940	6,404	26,075	10,887	40,315
1917.....									4,886	86,560	11,690	58,244

* Compiled from reports of State Mine Inspectors and Port Wardens, Port of Seattle.

COAL AND COKE IMPORTS AND EXPORTS TO AND FROM THE PORT OF TACOMA IN LONG TONS, 1900-1916.*

YEAR	COAL						OOKE			
	IMPORTS		EXPORTS				IMPORTS		EXPORTS	
	Tonnage	Value	Coastwise and Domestic		Foreign		Tonnage	Value	Tonnage	Value
			Tonnage	Value	Tonnage	Value				
1900	.....	.....	.....	.....	.....	.....	624,564	\$1,987,377	.....	.....
1901	.....	.....	.....	.....	.....	.....	686,106	2,008,734	.....	.....
1902	.....	.....	.....	.....	.....	.....	370,434	1,166,867	.....	.....
1903	.....	.....	.....	.....	.....	.....	491,598	1,548,527	.....	.....
1904	.....	.....	.....	.....	.....	.....	444,165	1,392,120	.....	.....
1905	.....	.....	.....	.....	.....	.....	205,612	.....	.....	.....
1906	.....	.....	.....	.....	.....	.....	124,250	.....	.....	.....
1907	.....	.....	.....	.....	.....	.....	134,711	.....	.....	.....
1908	.....	.....	.....	.....	.....	.....	105,151	.....	.....	.....
1909	.....	.....	.....	.....	.....	.....	89,180	.....	.....	.....
1910	7,080	.....	.....	.....	.....	.....	89,180	.....	.....	.....
1911	4,332	.....	.....	.....	.....	.....	72,826	.....	.....	.....
1912	.....	.....	105,011	\$497,401	26,255	\$119,023	131,806	616,524	.....	.....
1913	.....	.....	90,654	\$67,433	60,597	\$17,394	151,241	614,827	.....	.....
1914	.....	.....	15,100	76,223	29,880	114,603	44,980	190,896	.....	.....
1915	708	\$2,812	.....	.....	.....	.....	57,432	215,755	None	None
1916	1,432	2,592	.....	.....	.....	.....	66,071	320,018	None	None
									24,164	\$133,143
									33,720	216,598

• Compiled from Mine Inspector's Reports and statements furnished by the Harbormaster, Port of Tacoma.

† For nine months only. ‡ From British Columbia.

Scale of wages in effect from September 1, 1916, until August 31, 1918, as per agreement between Washington Coal Operators' Association and the United Mine Workers of America, District No. 10.

DAY WAGE SCALE.

Inside Mine.

Miners	\$3 95
Timbermen	3 95
Timbermen's helpers	3 30
Tracklayers	3 95
Tracklayers' helpers	3 30
Motormen	3 50
Drivers	3 50
Parting boys	2 00
Parting boys	2 50
Greasers	1 95
Trappers	1 70
Rope riders	3 50
Locomotive engineers	3 50
Hoist men on development work	3 30
Cagers	3 50
Cagers' helpers	3 30
Pumpmen	3 30
Inside labor not specified	3 30
Boys working on hoists, except on main slopes and auxiliary slopes	2 60

Outside Mine.

Main hoisting engineer	\$3 75
Power plant engineer	3 60
Compressor engineers	3 55
Development engineers	3 25
Electricians:	
First class in and around mine	3 80
Second class in and around mine	3 50
Machinists:	
First class in and around mine	3 80
Second class in and around mine	3 50
Electricians' and machinists' helpers:	
In and around mine	3 00
Firemen	3 15
Cagers	3 25
Cagers' helpers	2 85
Teamsters	3 00
Greasers	1 55
Couplers	1 70
Dumper, cross-over	2 85
Blacksmiths, first	3 80
Blacksmiths, second	3 50
Blacksmiths, helpers	3 00
Carpenters, first	3 80
Carpenters, second	3 30
Car repairers	3 00
Choppers	3 00
Screeners (men)	2 40
Screeners (boys)	1 90
Moving picking table (men)	2 40
Moving picking table (boys)	1 90
Outside labor	2 75
All classes of labor not specified shall receive 15 cents per day increase.	

**DETAILED SYNOPSIS OF FATAL ACCIDENTS OCCUR-
RING IN THE STATE OF WASHINGTON
FOR THE YEAR 1916.**

Injured December 20, 1915; died January 13—Puget Sound Traction, Light and Power Company, Renton mine, Renton: P. J. Connell, nationality American, aged 41 years, occupation timberman, married. Sustained an injury by falling on a pick which he had stuck in a timber near where he was working in the mine. The point of the pick entered his body just below the heart, making a wound about five inches deep and probably puncturing the left lung. He was taken to the Renton Hospital, where he remained about one week, when he was removed to his home. On January 13, 1916, he died as a result of complications in the other lung. He leaves a widow.

Injured and died January 17—Mendota Coal and Coke Company, Mendota mine, Mendota: John G. McMullen, nationality American, aged 46 years, occupation mine foreman, married. Sustained injuries from an explosion of powder while in the act of opening a keg of black powder. The deceased attended personally to the distributing of explosives. On the day of the accident the mine was idle and the deceased intended to open the powder in the powder house and fill the canister for the men coming on the next shift. Instead of opening the black powder cans by removing the cover over the bung in the regulation manner, an opening was made by means of driving a wooden wedge into the top of the keg by means of a wooden mallet. According to an ante-mortem statement made by the deceased he started to open a keg in the above manner and the explosion followed immediately, exploding six or eight kegs of black powder. The deceased was severely burned and died twelve hours later. He leaves a widow and three children.

The exact cause of this accident could not be determined and various theories were advanced for its cause. The powder magazine was of brick and had a concrete floor. An automatic filler was used for filling the canisters and all movable parts and contacts were of copper. The inspector recommended that at all mines where black powder is used that the kegs be opened in the regulation manner by removing the slide over the bung.

January 19—Northwestern Improvement Company, mine No. 3, Ronald: Elijah Cox, nationality English, aged 78 years, occupation miner, married. Killed by flying coal from shots, about 4:30 p. m. in mine No. 3. The deceased and his partner, W. B. Scott, had prepared three shots in their room which they were to fire at quitting time that evening. Scott lighted two shots on the left rib and the deceased was to light one on the other rib of the room. When Scott lighted his shots he warned the deceased and left the room. The

deceased had some trouble lighting his shot and called Scott back to assist him. When Scott returned the two shots went off, killing the deceased and fracturing Scott's right leg in three places. The deceased leaves a widow.

The coroner's jury returned a verdict of carelessness on the part of the deceased miner.

One bad feature of this accident I wish to call to the attention of all superintendents at mines where no checking system is used: On the day of the accident the deceased and his partner, Scott, were the last men to shoot in this entry, and as no checking system was used the mine officials did not know that the deceased and Scott were still in the mine. Their families did not notify anyone that they had not come home until 10 o'clock that night. It was after midnight before the mine foreman was notified, and Scott, the injured man, lay suffering in the mine from the time of the accident, 4:30 p. m., until after midnight before he was rescued. Some checking system should be used at every mine so that the officials would know when all men are out, so in case of accident there would be no unnecessary delay in rendering assistance.

March 17—Pacific Coast Coal Company, Ford mine, New Castle: Andrew Lucis, nationality Greek, aged 27 years, occupation inside laborer, single. Killed by being struck by a runaway trip. The deceased and two other men were cleaning the switches at the first level. Coal was being hoisted from the second level at the time. In changing the trip at the top of the slope, the cager let a trip of four empty cars run down the slope, which dips about forty-five degrees. The runaway cars kept the track until they reached the first level, when they left the track. The deceased was caught in the wreckage and died shortly after from injuries received.

A safety block was installed at the top of the slope in order to try and avoid runaway trips from above the knuckle.

April 13—Northwestern Improvement Company, mine No. 3. Ronald: Joe Bertino, nationality Italian, aged 34 years, occupation miner, married. Electrocuted by coming in contact with a live trolley wire on the fourth west entry. The deceased and his brother were working in No. 13 pillar, which had been drawn down to a point about sixty feet from the entry. The deceased had gone down on the entry after he and his partner had lunch, or about 11:55 a. m. He had been on the entry only about a minute when his brother and the miners in No. 14 pillar heard him cry for help. They came to his assistance and found him lying on the track at No. 14 switch. He had apparently come in contact with the trolley wire, which is on the low side of the entry. First-aid men were on hand in a few minutes and an effort was made to resuscitate the injured man without success, although they worked on him for four hours. He leaves a widow and two children.

The only way such accidents can be guarded against or prevented where the voltage is over 250 volts is to guard the wires in such a way that it would not be possible to come in contact with the wires. Whether this can be done effectively under the present conditions in some of the mines of the state is a debatable question but guards should be placed wherever possible. At the mines where 250 volts are used no accidents have occurred that resulted seriously. Under any circumstances all persons should exercise care when around the feed lines and trolley wires.

April 27—Roslyn Fuel Company, Beekman No. 1, Beekman Enoch Browitt, nationality English, aged 45 years, occupation fireboss married. Killed by being struck by a loaded trip of mine cars. The deceased was fireboss on the midnight shift. On the morning of the accident at about 2:30 o'clock, the deceased and the night pumpman who also acted as electric-hoist engineer, had occasion to put some cars in the third east parting. Just before the accident the deceased and the hoistman had arranged to drop the cars into the parting after which the engineer was to go to the pumps and the deceased was to go about his other duties. The electric hoist is located just off the slope about 300 feet above the third east parting. When the cars were dropped into the parting they jumped the track and caught the deceased, killing him. The engineer, not knowing that the trip had left the track, went on with his other work, and at his regular quitting time, 4 a. m., he went home. The deceased was not found until the day shift came on at 8 a. m. He leaves a widow and five children.

The coroner's jury returned a verdict of accidental death.

Injured May 9, 1916; died May 13—Washington Union Coal Company, Tono mine, Tono: Antone Galkowski, nationality Russian, aged 40 years, occupation miner, married. Sustained injuries from a fall of coal on May 9th and died at the Centralia Hospital on May 13th. On the morning of May 9th, the deceased and partner were working as miners on the entry stumps on the water level. They had fired a shot in the top coal at quitting time the evening before. On the morning of the accident the deceased worked off the loose coal while his partner loaded the car. When they had taken down what they thought was all the loose coal they both started to mine, one on each side of the pillar. While the deceased was mining a piece of top coal which he was working under, it fell and caught him against the rib. His pelvis was fractured and he received other internal injuries from which he died on May 13th. An examination of the place after the accident showed that the top coal had come loose from a water slip above where the deceased was working. He leaves a widow and four children.

Accidents such as the above can be avoided only by a careful examination of the working place by the miners, and the propping up or taking down of all loose coal or rock.

Injured May 19; died May 22—Pacific Coast Coal Company, Burnett mine, Burnett: James Goodrum, nationality English, aged 52 years, occupation miner, single. Sustained injuries from a fall of rock on May 19th and died in the Tacoma Hospital on May 22d. The deceased and partner were working in No. 17 pillar on the block above the counter gangway. The deceased was squaring up the face after a shot fired the night before. He cut through to a slip in the rock which had a feather edge at lower end. Rock broke from slip, discharging props set under lower end and forcing him down the pitch, injuring him internally.

This accident was in many ways similar to the accident which occurred at Tono the week previous.

May 27—Pacific Coast Coal Company, Burnett mine, Burnett: Erick Kintala, nationality Finn, aged 34 years, occupation miner, married. Killed by flying rock from shot in rock tunnel used as a return airway from No. 3 to No. 4 seams. A round of shots had been fired at 3:30 p. m. when the day men went off shift. The deceased and partner went on shift at 7 p. m. The fireboss made an examination of the place at that time and he states that all shots had apparently been fired. Kintala was preparing to set up bar for drilling top holes while rock was being loaded out. His partner, who was about five feet from the deceased when the accident happened, in a statement said that the deceased was trimming the loose rock of the left hand side of tunnel when the explosion occurred, which instantly killed the deceased, and severely injured him. The deceased leaves a widow and three children.

After an examination of the tunnel and hearing the statements of the injured miner and others who were near at the time of the accident, I do not think the accident was caused by a miss shot. It was probably caused by the deceased miner's pick coming in contact with a stick of dynamite (60%) which had not exploded when the shots went off and was in the loose rock when he was leveling off to set up his bar. This accident can be classed as purely accidental.

June 24—Denny-Renton Clay and Coal Company, No. 2 mine, Taylor: Jacob Ramshak, nationality Austrian, aged 43 years, occupation miner, married. Killed by fall of coal in No. 5 west gangway. The deceased and his partner were working as miners on the gangway stumps on No. 5 seam. The deceased was standing on top of a partly loaded car starting an opening into the stump. The seam pitches about seventy degrees at this point in the gangway. In working off the coal which was above him, a large chunk, about two feet square, broke from the face and fell on the deceased, crushing his head and shoulders on top of the collar of the gangway set. His skull was fractured, which must have caused instant death. He leaves a widow and one child.

The prevention of such accidents as the above lies with the miner himself, as only his carefulness can prevent them.

June 27—Northwestern Improvement Company, mine No. 6, Roslyn: Dominic Trucano, nationality Italian, aged 61 years, occupation miner, married. Killed about 3:30 p. m., in room 111, seventh east entry. The deceased and his son, Joseph Trucano, were working in room 111. The miner working in No. 112 was driving a crosscut toward No. 111 room, and from the evidence given at the inquest and a statement by Joseph Trucano, it was agreed that when the shot was to be fired in the crosscut, a rap was to be given, which was the signal that the shot was to be lighted and no answer was expected, as the men in No. 111 would get clear. As soon as the men in No. 111 heard the rapping Joseph Trucano hastened down to the open crosscut to tell the man in No. 112 not to fire the crosscut shot, as they were not quite ready to fire. He was informed that the shot had already been lighted and was warned to get out of the place. The men in No. 111 thought they had plenty of time and prepared to light their shots. Just as Joe Trucano reached the face the shot went off, and blowing through the crosscut, struck the deceased, who was in the act of lighting a shot next to the 112 rib, causing his death and badly injuring his partner. The crosscut in No. 112 was in about eleven feet. The shot fired was drilled in about six feet. The pillar was about twenty feet through. The deceased leaves a widow and six children.

The jury at the inquest returned a verdict of "accidental death," and recommended that "hereafter anyone before firing shots in any crosscut, shall in person notify each other before lighting."

Such accidents are avoidable, and where men fire their own shots they should go in person and warn the men in the next place when about to fire in any crosscut and not light the shots until the men in the room are clear. Rapping should never be resorted to for the purpose of notifying when a shot is to be lighted. Similar accidents have happened where men fire their own shots contrary to instructions and they can be avoided either by the men themselves, careful shotlighters, or preferably by firing with battery.

July 7—Northwestern Improvement Company, mine No. 4, Roslyn: Tony Stanfel, nationality Austrian, aged 45 years, occupation assistant foreman, married. Killed by falling down shaft. No. 4 mine had been abandoned for some time and the shaft, which is 650 feet deep, is used for holsting water, the water being kept at a level of 125 feet from the bottom. On the day of the accident, the deceased with two others were doing some repair work in the shaft and cleaning out some timber which was floating on top of the water. They had made several trips in the shaft, using a bucket attached to the cable for that purpose. They had finished their work and were coming up on the bucket and when about 100 feet from the top the deceased, who was standing on one side of the bucket with his arm around the holsting rope, for some unknown reason lost his hold and fell down the shaft. The deceased was considered a very careful man

and had been employed at the shaft for many years when it was operating, and had been selected for this work for that reason. All concerned were at a loss to account for the accident, as the men on the bucket with the deceased at the time of the accident were sure nothing struck him. He leaves a widow and six children.

The coroner's jury returned a verdict of accidental death.

September 3—Durham Colliery Company, mine No. 1, Durham: Edward Truce, nationality Austrian, aged 31 years, occupation fireboss, married, and Fred Blacker, nationality American, aged 28 years, occupation electrician, married. Killed by an explosion of gas and dust. The deceased and Superintendent McDowell were in the mine at the time of the accident. They were installing an electric feed line to a point inside of the last chute, where an air compressor was to be installed to operate a mining machine. The narrow work in this mine generates considerable gas, and recommendations to eliminate the danger from this were submitted to the management by the Mine Inspector some time previous to the accident. The fan was shut down at 7 a. m. on September 3, thirty hours prior to the accident. At the time of the accident, those in the mine carried open lights. Truce and Blacker started to pull the wire to the face of the gangway, McDowell watching the reel about 500 feet from the face. When Truce and Blacker reached the inside chute, No. 17, they lighted the gas which extended from chute No. 17 to the face, about fifty feet, causing an explosion which killed both. McDowell was able to reach the outside, being slightly injured by the force of the explosion. The explosion caved the gangway for about 150 feet between where McDowell and the other two men were. The bodies of the deceased were taken out through the counter about four hours after the accident. Both the deceased leave widows.

If ordinary caution had been used this accident would not have occurred. Those in charge on the day of the accident should not have gone into the mine without safety lamps, for it was almost a certainty that gas would be found, especially inside of the last chute.

The Inspector recommended and insisted that the recommendations made previous to the accident be observed; also that the superintendent in charge be replaced by a more careful man, who would exercise more caution for the safety of himself and those under him.

September 12—Carbon Hill Coal Company, Electric Slope mine, Carbonado: Joe Testa, nationality Italian, aged 33 years, occupation miner, married. Killed by a fall of rock in No. 4 pillar of the water level. The deceased and his partner were taking a skip up No. 4 pillar. They were preparing to put a stringer under a piece of bad rock near the top of the pillar. Testa was digging a hitch in the top coal, which was to support one end of the stringer, when the loose rock fell, catching him under it, injuring him internally, from which injury he died two hours later. He leaves a widow and three children.

Accidents such as the above can be avoided only by the carefulness of the miners themselves in timbering or taking down loose rock as soon as it is found. This accident was unfortunate, as the deceased and his partner were preparing to do this when the rock fell.

September 19—Pacific Coast Coal Company, Ford mine, New Castle: John Hendrickson, nationality Finn, aged 40 years, occupation miner, married. Killed when section of pillar caved in the pillar workings, west side Muldoon seam, Ford mine. The deceased and two others were taking out a small block of coal above the first crosscut, which would have finished this section of the pillar. An area of worked out ground was standing, which generally gives sufficient warning before it caves. Hendrickson's partners testified that the place seemed safe when, without warning, it caved, catching the deceased under the fall and killing him instantly. One of his partners had a narrow escape, losing his lamp and cap in getting out. The deceased leaves a widow and eight children.

The deceased was experienced on this work, as he had worked at these mines about eighteen years, most of the time on this kind of work. There was very little the Inspector could recommend after this accident, as the men working in such places should be better able to judge the condition of the place than any other person.

October 14—Northwestern Improvement Company, Cle Elum mine, Cle Elum: Tony Passen, nationality Italian, aged 20 years, occupation miner, single. Electrocuted by coming in contact with a live trolley wire on the sixth level of the slope workings of No. 2 mine. The deceased and his brother were working on the sixth level stumps. They loaded their own coal and delivered it to a parting near the outside of the mine. The deceased was preparing to take a loaded trip to the parting. In passing the trip he had to go under the trolley wire, which carried 500 volts, direct current. His brother heard him shout and on coming out to where he was, found him lying unconscious near the motor. This accident happened on the night shift and before help arrived, the deceased died.

The only way such accidents can be guarded against is by guarding the trolley wires so it will be impossible for anyone to come in contact with them. In this case the entry was on the retreat and the height of the entry would not permit wires being guarded. Some system will have to be adopted in this field to eliminate such accidents and the inspection department would welcome suggestions from the mine officials in the Roslyn-Cle Elum field in regard to this matter.

Injured October 13; died October 24—Pacific Coast Coal Company, Burnett mine, Burnett: Steve Janich, nationality Austrian, aged 30 years, occupation miner, single. Sustained injuries while working in the main rock tunnel going west from No. 2 seam, east dip, third level, from a fall of rock, and died in the insane asylum at Steilacoom about 4:00 a. m., October 24. The deceased was taking

down a loose rock, near face of rock tunnel, when it came down. Another piece of rock also broke loose and coming down struck him on the back of the head, shoulders, back and ankle. He was cut on the back of the head, and shoulders, back and ankle badly bruised. He was taken to the Tacoma General Hospital in the evening of the same day he received the injuries. At the hospital he became delirious and on October 18th he was taken to the insane asylum at Stellacoom, where he died.

The following is taken from a report sent to the operating company at Burnett from Stellacoom:

"Our diagnosis in this case was manic depression, insanity of the manic type, with death from exhaustion.

"Our history of this case is very incomplete, as we know very little about him prior to the time that he received his accident. It is stated that at the time he received the injury to his leg, he also injured his head, but we did not determine any evidence of that while here.

"There may be some question of the diagnosis in this case, as it is very possible that he was suffering from an acute traumatic delirium, and we would not care to express an opinion without having further knowledge of the case."

November 13—Wilkeson Coal and Coke Company, Wilkeson mine, Wilkeson: James Marsden, nationality American, aged 17 years, occupation outside laborer, single. Suffocated by the fine coal when he fell in the washed coal bin at the coke oven plant. The coal in this bin was very fine and it was the duty of the deceased to start it while the larry car was being loaded from the bin through the chute underneath. The deceased went on duty at 6:30 a. m. and was not seen again until about 7:15 a. m., when the men loading the larry car discovered his body as it came through the chute with the coal. In starting the coal, in some way not known he fell into the hole made by the fine coal being loaded out and was buried under the coal which rushed down on him.

After an investigation of this accident, the Inspector recommended that the person starting the coal in the bin should have a rope tied around his body so that when the coal is started, if carried with it, he would have some chance to save himself.

December 6—Carbon Hill Coal Company, Miller mine, Carbonado: Alexander Kissel, nationality Russian, aged 22 years, occupation miner, single. Killed by being struck by flying rock from shots fired at the face of the water level rock tunnel of the Miller mine. The deceased and his partner, Rees Jenkins, were driving the rock tunnel. This tunnel is in the footwall and runs about parallel to the strike of the seam and is connected to the longwall face by means of cross-cuts driven in the rock. After examining the face of the tunnel and from a statement made by Jenkins, who was slightly injured, the deceased was killed when a round of shots was fired in the face.

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Jenkins and the deceased had loaded and tamped nine holes, after which it was agreed that Jenkins would take the extra powder back to the switch, fix his carbide lamp, and then come in and help light the shots. When Jenkins left the face the deceased had but two boards to put down to shovel the rock from later. When finished with this work he was to wait until Jenkins returned. It was about 350 feet back to the switch and Jenkins had gone to the switch as he was returning to the face, and when about thirty-six feet from the face a shot went off. He happened to be standing along side of a car. A piece of rock struck him, knocking him down, after which he crawled into a blind crosscut nearby. He heard some other shots go off at some time after he went outside and reported to the foreman. On investigation the deceased was found dead about ten feet from the face. The nine holes had all gone off. They were made by jackhammer drill, were short and loaded with six and seven sticks of powder. The fuses were short. It appears that the deceased decided to light the fuses himself and before he could get away the shots went off, killing him.

This accident could have been avoided if the holes had been fired by the two men as planned or if longer fuses had been used.

Injured and died December 12—Wilkeson Coal and Coke Company, South 3 mine, Wilkeson: Charles Serapini, nationality Italian, aged 37 years, occupation miner, married. Sustained injuries by being struck by a niggerhead. The deceased was fatally injured about 9 a. m. on December 12, and was taken to the St. Joseph's Hospital, Tacoma, where he died late in the afternoon. The deceased and his partner, Carl Sanden, were working as miners on the pillar between chutes 7 and 8 on the north side. They were taking an angle from a point about eighteen feet from the gangway on the inside rib of chute 7. Being so near the gangway everything was in good shape. The battery of cogs was in place above the first counter at which point the place was twenty-two feet wide. The seam does not pitch very heavily at this point, but to make it easier to cross from the counter across the place to the angle, a prop was set in the chute just below the cogs and in line with the counter. A few laggings were placed above the prop. The day before a large niggerhead was encountered on the angle and was broken by a shot. The piece broken off was rolled up the lagging above the prop in order to keep it out of the chute. The deceased was standing on this niggerhead watching his partner, who was just below him about six feet, making the coal run down the angle, when the prop came out. The deceased slid down ahead of the niggerhead, which pushed his head against the angle when he reached the narrow part of the chute, fatally injuring him. He leaves a wife and five children.

FATAL CASUALTIES, 1916.

Date	NAME	Nationality	Age	Occupation	Residence	Married	Single	Widows	Children	Dependents	Cause of Death
1915											
Dec. 20	P. J. Connell *	American	41	Timberman	Benton	1		1		1	Fell on a pick.*
1916											
Jan. 17	J. G. McMullen	American	46	Mine foreman	Mendota	1		1	3	2	Explosion of powder.
Jan. 19	Eljah Cox	English	78	Miner	Ronald	1		1		1	Flying coal from shots.
Mar. 17	Andrew Lucis	Greek	27	Inside laborer	New Oastle		1				Struck by runaway trip.
Apr. 13	Joe Bertino	Italian	34	Miner	Ronald	1		1	2	3	Electrocuted by live trolley wire.
Apr. 27	Enoch Browitt	English	45	Fireboss	Ronald	1		1	5	4	Struck by mine cars.
May 9	A. Galkowski **	Russian	40	Miner	Tono	1		1	4	5	Fall of coal.**
May 19	J. Goodrum †	English	52	Miner	Burnett		1				Fall of rock.†
May 27	Erick Kintala	Finn	34	Miner	Burnett	1		1	3	4	Flying rock from shots.
June 24	Jacob Ramshak	Austrian	48	Miner	Taylor	1		1	1	5	Fall of coal.
June 27	Dom. Trucano	Italian	61	Miner	Roslyn	1		1	6	3	Struck by shot fired in next room.
July 7	Tony Stanfel	Austrian	45	Aast. foreman	Roslyn	1		1	6	7	Fell down shaft.
Sept. 3	Edw. Truce	Austrian	31	Fireboss	Durham	1		1		1	Explosion of gas and dust.
Sept. 3	Fred Blacker	American	28	Electrician	Durham	1		1		1	Explosion of gas and dust.
Sept. 12	Joe Testa	Italian	33	Miner	Carbonado	1		1	3	4	Fall of rock.
Sept. 19	Jno. Hendrickson	Finn	40	Miner	New Castle	1		1	8	7	Caught by caveln.
Oct. 14	Tony Fassen	Italian	20	Miner	Cie Elum		1				Electrocuted by live trolley wire.
Oct. 13	S. Janich ††	Austrian	30	Miner	Burnett		1				Fall of rock.††
Nov. 13	J. Marsden †	American	17	Outside labore	Wilkeson		1				Suffocated in coal bin.
Dec. 5	Alex. Kiesel	Russian	22	Miner	Carbonado		1				Flying rock from shots.
Dec. 12	Chas. Serapini	Italian	37	Miner	Wilkeson	1		1	5	6	Struck by niggerhead.
	Totals					15	† 6	15	46	54	

* Died January 13. ** Died May 13. † Died May 22. †† Died October 24. ‡ Killed outside of mine.

† One killed outside of mine.

RECAPITULATION OF FATAL CASUALTIES, 1918.

Residence	No.	Occupation	No.	Nationality	No.	Cause of Death	No.	Name of Mine	No.
Burnett.....	3	Assistant Foreman.....	1	American.....	4	Caught by cavein.....	1	Pe.....	1
Cie Elm.....	1	.....	1	Austrian.....	4	Electrocuted, trolley	2	ay.....	1
Carbonado.....	2	.....	2	English.....	3	wire.....	2	.....	1
Durham.....	2	.....	1	Finn.....	2	Explosion of gas and	2	.....	1
Mendota.....	1	.....	1	Greek.....	1	dust.....	2	.....	1
New Castle.....	2	.....	1	Italian.....	5	Explosion of powder.....	2	ta.....	2
Renton.....	1	miner.....	13	Russian.....	2	Fall of coal.....	3	.....	1
Ronald.....	3	Timberman.....	1	.....	.....	Fall of rock.....	1	.....	1
Roslyn.....	2	.....	.....	.....	.....	Fell down shaft.....	1	.....	1
Taylor.....	1	.....	.....	.....	.....	Fell on pick.....	1	.....	1
Tono.....	1	.....	.....	.....	.....	Flying coal from shots.	1	.....	3
Wilkeson.....	3	.....	.....	.....	.....	Flying rock from shots.	2	le.....	2
.....	.....	.....	.....	.....	.....	Struck by mine cars.....	1	over.....	1
.....	.....	.....	.....	.....	.....	Struck by niggerhead.....	1	.....	1
.....	.....	.....	.....	.....	.....	Struck by runaway trip.	1	.....	1
.....	.....	.....	.....	.....	.....	Struck by short fired in	1	.....	1
.....	.....	.....	.....	.....	.....	next place.....	1	ins.....	1
.....	.....	.....	.....	.....	.....	Suffocated in coal bin *.	1	s.....	1
Totals †.....	21	.....	21	.....	21	.....	21	.....	21

* Killed on surface. † One killed on surface and twenty underground.

FATAL ACCIDENTS FOR TWELVE YEARS BY LEADING CAUSES.

CAUSE	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1905-1916
Cave in pillars, including material sliding down.....		1		1		1	1					2	5
Clothing caught by machinery.....											1		4
Drowned by underground body of water, caving of gravel.....						1	2			1			2
Electrocuted.....		1	3	1	4	18	3	3	1	1	2	2	23
Explosion of gas or dust.....		1	11	1	13				6	1	31	2	84
Explosion of powder or caps.....		1				2			1		1	1	5
Falls of rock and coal.....		7	11	12	10	8	8	4	7	7	6	5	92
Flying pieces from blasts, including missed shots.....							1	1		1			10
Man falling (shaft, slope, chute, etc.).....	1	1		1	2	2	3	3			1	1	15
Outburst of gas, blowing out coal.....					2						2		4
Overcome by afterdamp, blackdamp, or firedamp.....					1								1
Run over or crushed by cars, locomotives and runaway trips.....	3	11	5	7	2	6	10	3	5	2	1	2	53
Struck by falling timber.....			1	2									3
Suffocated by coal in chutes or bins.....									1			1	2
Suffocated by powder smoke.....						1	1		1	2			11
Other causes.....			4		2	2				1	1	1	5
Unknown causes.....	1												1
Outside accidents.....	13	21	34	24	31	42	22	14	22	16	42	30	301
Total inside and outside accidents.....	13	22	37	25	39	43	27	14	22	17	45	21	325
Number of inside employees.....	4,080	3,929	4,865	4,270	4,420	4,663	4,893	4,362	4,711	4,383	3,668	3,593	4,310
Number of outside employees.....	4,976	5,227	6,113	5,341	5,725	6,121	5,781	5,673	6,065	5,647	4,828	4,746	5,565
Men inside killed per 1,000 employed.....	3.19	5.34	7.00	5.62	7.01	8.97	5.00	3.21	4.67	3.65	11.40	5.56	5.86
Men outside killed per 1,000 employed.....	2.61	4.21	6.05	4.08	6.81	7.03	4.67	2.46	3.62	3.01	9.32	4.42	4.91
Tons coal mined per 100,000 (inside and outside).....	218,968	149,509	100,600	119,049	92,037	92,543	131,419	239,093	174,166	179,845	56,540	143,790	121,869

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Table Showing Days Operated; Tonnage Mined; Number of Employees; Number of Men Injured; Time Lost by Men Returned to Work, and Number of Injured Returned to Work, at Each Mine, 1916.

	Days Operated	Tonnage Mined	Number of Employees	Number of Men Injured	Time Lost by Men Returned to Work	Number of Injured Returned to Work
Roslyn Cascade Coal Co., all mines...	212	67,027	74	12	86	0
						0
						47
						47
						4
						1
						6
						53
						77
						27
						26
						43
						240
						5
						1
						89
						6
						40
						68
						6
						9
						8
						4
						9
						2
						23
						Total
						med work

Table Showing Days Operated; Tonnage Mined; Number of Employees; Number of Men Injured;* Time Lost by Men Returned to Work, and Number of Injured Returned to Work, at Each Mine, 1916.—Continued.

NAME OF MINE	Average Days Operated	Short Tons Per Mine Per Year	Number of Employees			Number of Men Injured		Time Lost (Days) of Men Returned to Work			Number of Injured Returned to Work		
			Number of Employees		Total	Inside	Outside	Total	Inside	Outside	Total		
			Inside	Outside									
KITTITAS COUNTY (Continued)—													
Roslyn Coal & Coke Co., Plant.....	184	7,178	17	5	22	1	1	55	.....	55	1	.....	1
Roslyn Fuel Co., No. 1.....	207	122,008	94	19	113	13	1	4634	10	4734	17	1	18
Roslyn Fuel Co., No. 2.....	225	116,524	92	13	105	22	22	299	.....	299	15	.....	15
Roslyn Fuel Co., Summit.....	142	20,788	46	11	57	7	7	82	.....	82	5	.....	5
Independent	65	7,271	66	15	80	6	1	95	34	954	3	1	4
T. B. Wright & Sons, No. 1.....	89	304	3	1	4	.....	.....	.....	.....	.....	.....	.....	.....
The County.....	† 224	1,316,968	1,311	202	1,513	366	20	386	5394	8,5794	389	20	349
LEWIS COUNTY.—													
Centrella Coal Mining Co., Empress.....	136	8,625	14	4	18	2	2	113	.....	113	2	.....	2
Ford's Prairie.....	188	10,207	12	4	16	1	1	16	.....	16	1	.....	1
Free Burning Coal Co., Ladd, No. 3.....	300	4,821	4	2	6	2	2	119	.....	119	2	.....	2
Mendota, No. 1.....	159	50,985	55	9	64	12	1	118	6	124	10	1	11
Monarch, No. 1.....	150	5,069	5	1	6	.....	.....	.....	.....	.....	.....	.....	.....
Salzer Valley.....	123	1,700	2	2	4	.....	.....	.....	.....	.....	.....	.....	.....
Sheldons	253	14,377	13	3	16	3	1	413	64	48	3	1	4
Superior, No. 2.....	269	11,758	13	4	17	2	2	16	.....	16	1	.....	1
The County.....	† 187	109,121	118	29	147	22	3	4234	124	486	19	2	21
PIERCE COUNTY.—													
Burnett.....	232	95,822	155	50	205	54	7	61	111	1,092	40	4	44
Carbonado, outside (c).....	270	.....	.....	.....	.....	3	27	80	19	9274	3	23	26
Carbonado, Wingate.....	280	.....	.....	.....	.....	23	1	29	678	678	26	.....	26
Carbonado, Dooty (2 and 3).....	.....	.....	.....	.....	.....	14	14	14	364	364	11	11	11
Carbonado, No. 5.....	.....	.....	.....	.....	.....	14	14	14	165	165	12	12	12
Carbonado, No. 6.....	159	.....	.....	.....	.....	8	.....	8	317	317	8	.....	8

* Includes all non-fatal accidents by which the time lost was for periods of 24 days or more, as reported to the Industrial Insurance Commission and this department, and for which compensation was awarded for time lost. Does not include accidents happening to office workers. Includes accidents happening to coke oven workers. † Found by dividing the sum of the products of the total number of men employed and days worked at each mine by the total number of men employed. (c) Mine not given, and not assignable to any one mine.

Table Showing Days Operated; Tonnage Mined; Number of Employees; Number of Men Injured;* Time Lost by Men Returned to Work, and Number of Injured Returned to Work, at Each Mine, 1916.—Concluded.

NAME OF MINE	Average Days Operated	Short Tons Per Mine Per Year	Number of Employees		Number of Men Injured		Time Lost (Days) of Men Returned to Work		Number of Injured Returned to Work		
			Inside	Outside	Total	Inside	Outside	Total	Inside	Outside	Total
PIERCE COUNTY (Continued)—											
Carbonado, Carbon (Old No. 9).....	285	.....	.....	.....	.....	18	225	.....	15	.....	15
Carbonado, Miller.....	.....	.....	.....	.....	.....	14	257	.....	12	.....	12
Carbonado, Electric Slope.....	282	.....	.....	.....	.....	6	85	.....	5	.....	5
Carbonado, all mines.....	279	249,124	383	100	483	105	2,105	505	93	23	116
Fairfax.....	311	16,108	48	22	70	7	85	153	4	8	7
Gale Creek.....	282	32,018	55	30	85	17	485	16	17	1	16
Marcy (Montezuma).....	80	4,212	37	25	62	1	41	11	1	1	2
South Wilks, Champion.....	88	4,104	19	10	29	2	15	.....	2	.....	2
Spiketon, No. 10.....	188	28,417	41	34	75	18	270	19	18	1	19
Wilkeson, outside (c).....	.....	.....	.....	.....	.....	15	.....	238	.....	18	18
Wilkeson, South 1.....	.....	.....	.....	.....	.....	5	79	.....	4	.....	4
Wilkeson, South 3.....	.....	.....	.....	.....	.....	4	424	.....	3	.....	3
Wilkeson, South 8.....	.....	.....	.....	.....	.....	21	345	.....	18	.....	18
Wilkeson, all mines.....	282	108,387	110	73	183	30	405	239	25	13	38
The County.....	† 261	589,162	799	880	1,179	231	4,467	969	199	46	245
THURSTON COUNTY—											
Tono No. 1, Tono.....	199	165,005	95	35	130	15	228	51	14	5	19
The County.....	† 199	165,005	95	35	130	15	228	51	14	5	19
WHATCOM COUNTY—											
Blue Canyon.....	289	5,988	12	2	14	.....	.....	.....	.....	.....	.....
The County.....	† 289	5,988	12	2	14	.....	.....	.....	.....	.....	.....
The State.....	† 218	3,019,000	3,886	1,150	4,746	917	17,905	2,279	773	101	874

* Includes all non-fatal accidents by which the time loss was for periods of 24 days or more, as reported to the Industrial Insurance Commission and this department, and for which compensation was awarded for time loss. Does not include accidents happening to office workers. Includes accidents happening to coke oven workers. † Found by dividing the sum of the products of the total number of men employed and days worked at each mine by the total number of men employed. (c) Mine not given, and not assignable to any one mine.

Table Showing Number of Injured Not Returned to Work,* Number of Tons Mined Per Man Injured; Average Time Lost Per Man Returned to Work, and Number of Employees to Each Man Injured, at Each Mine, 1916.

NAME OF MINE	Number of Injured Not Returned to Work*			Number of Tons Mined Per Man Injured			Average Time Lost Per Man Returned to Work		Number of Employees to Each Man Injured			
	Inside	Outside	Total	Inside	Outside	Total	Inside	Outside	Inside	Outside	Inside and Outside	
KING COUNTY—												
Bayne (Carbon and Daly).....	4	1	5	2,444.0	14,667.7	2,005.3	19.18	24.83	19.91	2.6	4.8	2.9
Black River (a).....							36.50		36.50			
Denny-Benton, Renton	5		5	3,068.3	39,888.0	2,849.1	92.50	78.00	90.89	3.0	15.0	3.1
Durham (Nos. 1 and 2).....	7	1	8	2,190.6	24,097.0	2,008.1	82.87		82.87	6.5	19.0	6.6
Grand Ridge.....	1		1	2,074.5	16,596.0	1,844.0	84.92	31.00	34.48	4.6	19.0	6.2
Hyde.....	4	1	5	3,542.5	21,255.5	3,066.5	25.98	12.00	24.38	3.9	16.0	9.9
Isaquah.....				3,700.0	7,400.0	2,466.7	35.25	120.50	63.67	4.7	9.5	6.3
National (land 3) b).....												
Ozark Coal Company (Navy).....												
Pacific Coast Coal Company, No. 11.....	23		23	2,351.9	66,991.6	2,274.4	15.50	6.67	15.11	8.7	34.0	4.7
Pacific Coast Coal Company, No. 14.....												
Pacific Coast Coal Company, Ford.....	7	1	8	8,376.7	25,180.2	6,292.5	12.41	17.18	13.73	5.7	12.4	7.4
Pocahontas.....	3	2	5	1,422.8	3,874.3	1,066.6	47.20	13.00	41.50	2.6	5.7	8.5
Renton, P. S. T., L. & P. Co.....	17	1	18	1,877.8	27,040.6	1,755.8	23.08	18.87	21.49	2.5	9.6	3.0
Tag-Tennant Company (a).....							52.00		52.00			
Taylor (1 and 2).....				5,220.5	20,882.0	4,176.4	12.75	5.00	11.20	6.5	5.0	6.2
The County.....	71	7	78	3,142.3	25,407.8	2,795.4	22.84	25.51	23.16	4.5	14.3	5.6
KITTITAS COUNTY—												
Northwestern Improvement Company, No. 6.....	7		7	4,980.8	241,611.0	4,832.2	23.97	56.00	24.72	4.2	27.0	4.7
Northwestern Improvement Company, No. 8 (a).....	1		1									
Northwestern Improvement Company, No. 8.....	2		2	2,593.5	121,753.5	2,484.7	32.45	36.50	32.54	2.5	14.5	2.7
Northwestern Improvement Company, No. 8.....	6		6	4,069.7	153,697.0	4,808.5	24.13	6.00	23.46	5.0	25.0	5.6
Northwestern Improvement Company, No. 7.....	2		2	2,697.6	46,947.0	2,470.1	19.43	27.00	19.77	2.5	8.0	2.7
Northwestern Improvement Company, Ole Flum.....	4		4	2,634.0	27,386.8	2,402.9	18.65	41.70	20.88	2.4	4.2	2.6
Northwestern Improvement Company, outside (c).....												
Rooslyn Cascade Coal Company, No. 1.....	1		1				7.75	16.91	10.91			
Rooslyn Cascade Coal Company, No. 2.....	1		1				10.50		10.50			

• Includes outside

* Includes accidents in course of assembly or claims for time lost held under advisement, and no time loss given.
 (a) Under development. (b) Formerly the Sunset Mine. (c) Mine not given, and not assignable to any one mine.

Table Showing Number of Injured Not Returned to Work;* Number of Tons Mined Per Man Injured; Average Time Lost Per Man Returned to Work, and Number of Employee to Each Man Injured, at Each Mine, 1916.—Continued.

NAME OF MINE	Number of Injured Not Returned to Work*		Number of Tons Mined Per Man Injured		Average Time Lost Per Man Returned to Work		Number of Employees to Each Man Injured	
	Inside	Outside	Inside	Outside	Inside	Outside	Inside	Outside
KITTITAS COUNTY (Continued)—								
Roslyn Cascade Coal Company, all mines.....	2	.....	11,169.5	.....	11.75	.....	12.3	.....
Roslyn Coal & Coke Company, Plant.....	.....	.....	7,173.0	.....	55.00	.....	17.0	.....
Roslyn Fuel Company, No. 1.....	1	.....	6,778.2	.....	27.23	.....	5.2	.....
Roslyn Fuel Company, No. 2.....	7	.....	5,230.5	.....	17.36	.....	4.2	.....
Roslyn Fuel Company, Summit.....	2	.....	2,989.7	.....	16.40	.....	6.6	.....
Independent.....	3	.....	1,311.8	.....	31.67	.....	10.3	.....
T. B. Wright & Sons, No. 1.....	.....	.....	7,271.0	.....	.....	.....	15.0	.....
The County.....	37	.....	65,849.6	.....	24.41	.....	3.6	.....
LEWIS COUNTY								
Centralia Coal Mining Company, Empress.....	.....	.....	4,312.5	.....	56.30	.....	7.0	.....
Ford's Prairie.....	.....	.....	10,207.0	.....	16.00	.....	12.0	.....
Free Burning Coal Company.....	.....	.....	.....	.....	.....	.....	.....	.....
Ladd, No. 3.....	.....	.....	2,300.5	.....	50.50	.....	2.0	.....
Mendota, No. 1.....	2	.....	4,243.7	.....	11.30	.....	4.6	.....
Monarch, No. 1.....	.....	.....	.....	.....	.....	.....	.....	.....
Salzer Valley.....	.....	.....	.....	.....	.....	.....	.....	.....
Sheldons.....	1	.....	4,792.3	.....	13.36	.....	4.3	.....
Superior, No. 2.....	.....	.....	5,876.5	.....	16.00	.....	6.5	.....
The County.....	3	.....	4,980.0	.....	22.29	.....	3.4	.....
PIERCE COUNTY—								
Hurgett.....	14	3	1,774.5	.....	24.52	.....	2.9	.....
Carbonado, outside (c).....	.....	4	.....	.....	6.33	.....	.....	.....
Carbonado, Wingate.....	2	1	.....	.....	25.33	.....	.....	.....
Carbonado, Doudy (2 and 3).....	3	.....	.....	.....	33.09	.....	.....	.....
Carbonado, No. 5.....	2	.....	.....	.....	13.73	.....	.....	.....
Carbonado, No. 6.....	.....	.....	.....	.....	30.68	.....	.....	.....

* Includes accidents in course of assembly or claims for time lost held under advisement, and no time loss given.
(c) Mine not given, and not assignable to any one mine.

RECAPITULATION OF NON-FATAL ACCIDENTS,* CAUSE OF INJURY, NATURE OF INJURY, PERCENTAGE OF INJURIES, AND TIME LOST, 1916.

CAUSE OF INJURY	NUMBER INJURED				NATURE OF INJURY	Time Lost Days		Per centage of In- juries	NUMBER INJURED				Per centage of In- juries
	In- side	Out- side	Total	Re- turned to Work		Men Returned to Work	Average		In- side	Out- side	Total	Re- turned to Work	
Axe	31	7	38	29	Ankle broken	693	14.50	3.57	3	.....	3	3	0.39
Bar .....	.....	4	4	4	Ankle infected	55	13.75	0.39	4	.....	4	4	0.39
Bump in mine	7	.....	7	5	Ankle bruised	233	56.00	0.68	19	3	22	21	2.12
Carbide	2	.....	2	2	Ankle cut	11	5.50	0.19	2	1	3	3	0.29
Chute spout and cars	6	.....	6	6	Ankle injured	318	53.00	0.58	1	.....	1	.....	0.10
Coal	12	.....	12	10	Ankle sprained	106	10.60	1.16	5	7	12	10	1.16
Coal coming down chute	23	1	24	16	Arm broken	193	13.46	2.33	5	.....	5	4	0.43
Coal .....	.....	1	1	1	Arm bruised	19	19.00	0.10	12	.....	12	11	1.16
Door fell .....	.....	1	1	.....	Arm burned .....	.....	.....	0.10	1	.....	1	.....	0.10
Engine, hoisting	1	1	2	2	Arm amputated	57	28.50	0.19	1	.....	1	1	0.10
Explosion of gas	23	.....	23	24	Arm injured	675	28.12	2.70	6	1	7	7	0.68
Explosion of powder	1	.....	1	1	Arm cut	178	178.00	0.10	1	.....	1	.....	0.10
Fall of coal	91	.....	91	73	Back bruised	1,300	32.08	8.79	36	3	39	29	3.77
Fall of rock	196	.....	184	164	Back injured	4,494	27.34	17.78	11	1	12	10	1.16
Fell down chute	7	1	8	7	Back strained	183	26.14	0.77	40	3	43	37	4.14
Fell	23	14	40	33	Back wrenched	1,189	33.10	3.86	10	.....	10	8	0.97
Flying coal	33	.....	32	69	Body bruised	1,055	15.31	7.92	19	.....	21	13	2.02
Flying object	2	.....	6	6	Body burned	31	15.50	0.58	.....	1	1	1	0.10
Hammer	2	.....	6	6	Body injured	115	19.16	0.58	4	.....	4	2	0.39
Horses, runaway	3	.....	2	2	Body bruised	71	36.75	0.19	2	.....	2	2	0.19
Jumping off cars	7	1	8	8	Chin bruised	203	36.56	0.77	.....	1	1	1	0.10
Lifting	30	5	44	37	Chin cut	747	20.20	4.25	1	.....	1	.....	0.10
Locomotive, steam	4	.....	4	4	Chest crushed	20	5.00	0.30	2	.....	2	2	0.19
Machinery .....	.....	7	7	7	Chest bruised	204	29.21	0.63	1	.....	1	1	0.10
Man car, fell off	2	.....	2	2	Collarbone broken	41	20.50	0.19	1	.....	1	.....	0.10
Mine cable .....	.....	2	2	.....	Ear cut .....	.....	.....	0.19	3	.....	3	2	0.29
Mine car	23	14	36	31	Ear injured	1,065	24.25	9.27	2	.....	2	1	0.19
Mine car and roof	7	.....	7	6	Elbow bruised	165	27.80	0.68	1	.....	1	.....	0.10
Mine car and timber	19	.....	19	16	Elbow infected	339	21.21	1.53	.....	1	1	1	0.30
					Elbow cut								

* Includes all non-fatal accidents by which the time loss was for periods of 24 days and more. Does not include accidents happening to office workers. Includes accidents happening to coke oven workers.

Recapitulation of Non-Fatal Accidents, Cause of Injury, Nature of Injury, Percentage of Injuries, Etc.—Continued.

CAUSE OF INJURY	NUMBER INJURED			Time Lost Days Men Returned to Work	Per centage of In- juries	NATURE OF INJURY	NUMBER INJURED			Time Lost Days Men Returned to Work	Per centage of In- juries		
	In- side	Out- side	Total				Re- turned to Work	In- side	Out- side			Total	Re- turned to Work
Mining machine	7	7	14	924	15.41	Elbow dislocated	1	1	1	1	1	19	19.00
Motor	3	1	4	964	24.67	Eye bruised	14	14	14	12	12	195	16.25
Motor and car	1	1	2	6	6.00	Eye cut	3	3	3	3	3	18	4.33
Mine pump	1	1	2	184	19.50	Eye injured	86	86	86	77	77	1,159	15.06
Mule, kicked by	7	1	8	1104	13.78	Face bruised	2	1	3	3	3	41	7.25
Nail	11	2	13	964	8.95	Face burned	3	1	4	4	4	29	0.89
Pick	15	1	16	2214	15.82	Face cut	3	1	4	1	1	5	5.00
Piece of sheet iron	6	6	12	77	12.83	Face injured	2	2	2	2	2	9	4.50
Pipe fell	3	1	4	674	22.50	Foot bruised	34	2	36	33	33	527	15.86
Pushing car	14	14	28	236	19.06	Foot broken	1	1	1	1	1	69	0.90
Pulley wheel	3	3	6	50	25.00	Foot cut	4	2	6	5	5	70	14.00
Railroad car	5	1	6	384	12.85	Foot infected	1	1	1	1	1	96	98.00
Rail fall	14	3	17	180	16.50	Foot injured	8	2	10	9	9	1564	17.38
Rock	6	6	12	824	16.50	Foot punctured	5	5	10	4	4	36	12.00
Rolling coal	19	19	38	409	25.30	Foot sprained	4	4	8	6	6	50	0.58
Room rope, wire from	4	2	6	80	19.45	Finger bruised	20	4	24	21	21	1834	30.56
Slipped and fell	35	7	42	5534	4.16	Finger broken	4	1	5	5	5	383	18.30
Silver of timber	8	1	9	160	22.85	Finger cut	27	7	34	28	28	1914	38.30
Sprag and car	8	1	9	1744	24.92	Finger infected	19	1	20	16	16	272	17.00
Sprag and prop	2	2	4	52	52.00	Finger injured	0	3	3	12	8	1004	13.66
Steam pipe	5	5	10	488	59.00	Finger mashed	18	5	23	20	20	2534	42.16
Struck by shot	28	5	33	983	35.10	Finger cut off	3	3	6	6	6	283	42.16
Timber fell	31	6	37	483	15.36	Hand bruised	24	2	26	18	18	286	14.72
Timber coming down	4	4	8	22	7.38	Hand burned	1	1	2	1	1	4	4.00
Timber coming down	4	4	8	22	7.38	Hand cut	20	3	23	32	32	507	21.12
Tipple	7	2	9	324	16.25	Hand infected	7	1	8	2	2	113	16.33
Tools	9	5	14	3004	16.70	Hand injured	2	2	4	2	2	28	14.00
Trolley wire, live	1	1	2	9	4.50	Hand mashed	2	2	4	2	2	134	6.75
Wire, lamp pick	1	1	2	6	6.00	Hands and face punctured	26	2	28	22	22	680	30.00
Wheelbarrow	2	2	4	8	16.00	Head bruised	8	1	9	11	11	1024	9.81
Windlass handle	2	2	4	8	8.00	Head cut	32	1	33	33	33	2964	10.18

Recapitulation of Non-Fatal Accidents, Cause of Injury, Nature of Injury, Percentage of Injuries, Etc.—Continued.

CAUSE OF INJURY	NUMBER INJURED			NATURE OF INJURY	NUMBER INJURED			Per centage of Injuries	Time Lost Days		Per centage of Injuries
	In-side	Out-side	Total		In-side	Out-side	Total		Men Returned to Work	Average	

Recapitulation of Non-Fatal Accidents, Cause of Injury, Nature of Injury, Percentage of Injuries, Etc.—Concluded.

CAUSE OF INJURY	NUMBER INJURED				NATURE OF INJURY	Time Lost Days		Per centage of In- juries			
	In- side	Out- side	Total	Re- turned to Work		Men Returned to Work	Average				
					Side injured	5	.....	5	361	7.30	0.45
					Side sprained	3	.....	3	57	19.00	0.29
					Thigh bruised	15	.....	15	192	18.00	1.45
					Thumb bruised	2	1	3	21	10.50	0.29
					Thumb broken	2	.....	2	57	57.00	0.19
					Thumb cut	20	3	23	360	18.00	2.22
					Thumb infected	4	2	6	104	26.50	0.58
					Thumb injured	4	.....	4	611	26.50	0.39
					Thumb mashed	2	1	3	23	11.00	0.29
					Toe amputated	1	.....	1	31	31.00	0.10
					Toes bruised	9	1	10	721	8.05	0.97
					Toes broken	4	1	5	208	40.50	0.68
					Toes cut	3	.....	3	57	19.00	0.39
					Toes injured	4	2	6	41	10.25	0.53
					Toes mashed	7	2	9	361	38.44	0.57
					Toes punctured	1	.....	1	10	10.00	0.10
					Wrist bruised	4	1	5	361	9.87	0.68
					Wrist broken	.....	1	1	59	59.00	0.10
					Wrist cut	2	.....	2	21	15.50	0.19
					Wrist infected	1	.....	1	6	6.00	0.10
					Wrist sprained	3	1	4	253	19.50	0.39
Totals.....	917	118	1,035	874	.....	.....	.....	.....	20,274	23.19	100.00

RECAPITULATION OF NON-FATAL ACCIDENTS, 1916.

Recapitulation of Non-Fatal Accidents, 1916.—Concluded.

Residence	Number Injured			Nationality	Number Injured			Name of Mine	Number Injured	
	In-side	Out-side	Inside and Out-side		In-side	Out-side	Inside and Out-side		In-side	Out-side
.....	Northwestern Imp. Co., out-side, Roslyn-Ole Num.*	.....	.....
.....	Northwestern Imp. Co., Ole Num.	52	57
.....	Pacific Coast Coal Co., No. 11.	80	91
.....	Pacific Coast Coal Co., No. 14.	.....	.....
.....	Pocahontas	3	11
.....	Reston	72	77
.....	Roslyn Cascade Coal Co., No. 1	2	2
.....	Roslyn Cascade Coal Co., No. 2	4	4
.....	Roslyn Coal & Coke Co., Plant	1	1
.....	Roslyn Fuel Co., No. 1	16	19
.....	Roslyn Fuel Co., No. 2	22	22
.....	Roslyn Fuel Co., Summit	7	7
.....	Sheldons	3	4
.....	Spiketon	16	19
.....	South Willis	2	2
.....	Superior	2	2
.....	Taylor	4	5
.....	Teig-Tannant	1	1
.....	Tono	15	20
.....	Wilkeson, outside*	.....	15
.....	Wilkeson, South 1	5	5
.....	Wilkeson, South 2	4	4
.....	Wilkeson, South 3	21	23
Totals.....	917	118	1,035	.....	917	118	1,035	.....	917	118
										1,035

* Also includes accidents, name of mine not given, had not assignable to any one mine.

**NUMBER OF NON-FATAL ACCIDENTS,* BY LEADING CAUSES
FOR THE YEARS 1911-1916.**

CAUSES	YEAR					
	1911	1912	1913	1914	1915	1916
As		14	29	40	22	1
Coal			18	16	14	1
Coal or rock coming down chute			29	10	10	2
Coal, flying		15	44	56	61	2
Engine, hoisting (steam or electric)				1	2	
Explosion of gas or dust	8	26	41	20	29	2
Explosion of powder, caps, etc.		4		4		
Fall of coal	13	72	67	80	73	2
Fall of rock, clay clod, roof, etc.	35	114	188	209	141	19
Fall down chute or shaft	3	3	10	2	3	
Fall		40	47	42	12	4
Jumping off cars			3	2	2	
Lifting		9	39	31	33	4
Locomotive, haulage		4	7	13	7	
Machinery and caught by same			10	7	12	
Mine cars	30	81	126	107	86	13
Mining machines, drills, etc.			2		3	
Mules			7	7	5	
Nail		3	8	9	11	1
Pick		4	8	14	12	1
Pulley wheel		13	6	2	3	
Pushing car			4	8	5	1
Rock			14	12	13	1
Ropes and wire from same	3		7	14	11	2
Slipped and fell			7	11	60	4
Struck by rock or coal from shots, windy shots	5	3	1	5	1	
Timber, struck by, etc.	7	12	44	56	41	8
Tools		6	22	10	15	2
Trolley wire, live		1	3	4	3	
Other causes	6	31	27	31	14	3
Outside accidents					32	11
Inside accidents					624	69
Total accidents	115	455	773	831	706	1,00
Time lost-days, men returned to work				20,833	18,184	20,27
Average time lost-days, per accident				26.32	26.05	23.1
Tons mined per accident, inside					3,861	3,28
Tons mined per accident, outside					29,382	25,59
Tons mined per non-fatal accident	20,835	7,358	4,356	3,659	3,413	2,91
Average days operated	230	211	229	200	165	21
Inside employees	4,308	4,302	4,711	4,333	3,063	3,59
Outside employees	1,333	1,311	1,334	1,304	1,145	1,16
Total number employees	5,781	5,673	6,045	5,647	4,208	4,74
Number injured per 1,000 employees	19.7	80.0	127.4	147.4	146.2	218.

* Prior to 1912 only the accidents of time loss of 30 days or more were reported. Those given for 1913 and 1914 are for accidents of time loss of 5 days and over and including 1915 accidents of time loss of 2½ days and over are given.

**PERCENTAGES OF NON-FATAL ACCIDENTS,* FOR THE YEARS
1911-1916, BY LEADING CAUSES.**

CAUSES	YEAR					
	1911	1912	1913	1914	1915	1916
Arm		2.1	2.8	1.8	2.1	
Coal			1.7	1.9	2.0	
Coal or rock coming down chute			2.0	1.2	1.4	
Coal, flying		2.2	5.7	6.6	8.6	
Engine, hoisting (steam or electric)				0.1	0.1	
Explosion of gas or dust.....	7.9	5.7	5.2	2.6	4.1	
Explosion of powder, caps, etc.....		0.9		0.5		
Fall of coal.....	15.7	15.8	8.7	9.6	11.1	
Fall of rock, clay clod, etc.....	20.4	22.0	20.4	22.1	20.0	
Falling down chute or shaft.....	2.6	0.7	1.2	0.2	0.4	
Fall		2.2	6.1	5.1	1.7	
Jumping off cars.....			0.4	0.2	0.2	
Lifting		2.0	2.9	2.7	4.7	
Locomotives, haulage		0.9	0.9	1.6	1.0	
Machinery and caught by same			1.2	0.2	1.7	
Mine cars	22.1	17.8	15.2	12.9	11.2	
Mining machines, drills, etc.....			0.2		0.4	
Mules				0.2	0.7	
Nail		0.7	1.0	1.0	1.6	
Pick		0.9	1.0	1.6	1.7	
Pulley wheels		2.2	0.2	0.2	0.4	
Pushing car			0.2	1.0	0.7	
Rock			1.2	1.2	1.2	
Ropes and wire from same.....	2.6		0.9	1.6		
Slipped and fall.....			0.9	1.2	2.2	
Struck by rock or coal from shots, windy shots.....	4.2	0.7	0.1	0.6	0.1	
Timber, struck by, etc.....	0.1	2.6	5.7	6.2	6.2	
Tools		1.2	2.2	1.2	2.1	
Trolley wire, live.....		0.2	0.4	0.2	0.4	
Other causes	5.2	6.0	2.6	2.7	2.0	
Outside accidents					11.6	
Inside accidents					22.4	
Total accidents	100.0	100.0	100.0	100.0	100.0	

* Prior to 1912 only the accidents of time loss of 30 days or more were reported. Those given for 1912 and 1914 are for accidents of time loss of 3 days and over. Since and including 1915 accidents of time loss of 2½ days and over for which compensation has been paid by the Industrial Insurance Commission, are given.

Table Showing Short Tons Produced, Number of Lives Lost, Total Days Operated, Average Men Employed, Shifts (Days-Men) Per Life Lost, and Shifts (Days-Men) Operated, at the Mines Where Fatal Accidents Have Occurred During the Period 1905-1916.

NAME OF COMPANY OR MINE	1906		1907		Total Days Operated	Average Men Employed	Shifts (Days-Men) Per Life Lost	Shifts (Days-Men) Operated	Fatal Accidents
	Tonnage	Killed	Tonnage	Killed					
CLALLAM COUNTY--									
Clallam Coal Co.--Foca Mine									
Tonnage and lives lost at mines listed									
KING COUNTY									
Carbon Coal Company--Nolte Spur	20,500		22,300						2
Carbon Coal & Clay Co. (Green River Coal Co.)									
Central Coal Co. Grand Ridge Mine									1
Denny-Renton Clay & Coal Co.--Renton			12,304						
Denny-Renton Clay & Coal Co. Taylor Mines	15,500		15,100						
1 Co.)									
2 Co.) (Deep Creek)									
3 Co.)									
4 Co.)									
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220 Co.)					</				

Northwestern Improvement Co.—No 7, Ole Klum	813,967	1	494,089	1	449,259	1	68,288	2	130,228	1
Northwestern Improvement Co. Ole Klum Mines					1,941		284,568	1	814,093	
Hoslyn Fuel Company—Beekman No. 1.							47,309		189,984	
Hoslyn Fuel Company Beekman No. 2.										
The County *										
Tonnage and lives lost at mines listed.....	1,279,686	6	1,439,868	7	1,584,481	9	1,411,305	15	1,650,590	21
	1,208,340	6	1,404,794	7	1,485,780	9	1,361,047	15	1,467,081	21
	3,000	1			200		1,178			
					22,951		19,275	1	26,841	1
(Koplah Coal Co.)									28,444	
			22,206		51,323		26,670		42,968	1
The County *										
Tonnage and lives lost at mines listed.....	4,500	1	30,000		101,275		59,275	1	101,451	2
	3,000	1	22,200		75,424		57,518	1	96,259	2
	173,226		191,989	2	246,713	1	251,721	2	289,612	2
ma (Co.).....	26,640	1	19,200		44,789	1	56,319		29,689	
	95,505		61,543	1	57,431	2	71,855	1	80,232	
De.....	59,040		86,704		78,875		60,892		77,147	
					2,770		10,186	1	42,813	1
	26,111		21,854		15,474	2	3,694		27,307	2
ek).....					19,263		8,889		31,432	
									635	2
	72,512		† 92,351	2	189,272		68,543	2	72,603	1
WILSON COAL & COKE CO WILSON MINE.....										
The County *										
Tonnage and lives lost at mines listed.....	465,324	1	488,862	5	612,539	6	558,406	6	615,285	8
	458,124	1	474,111	5	584,543	6	531,400	6	601,000	8
THURSTON COUNTY—										
Great Western Coal & Dev. Co. (King Coal Co.), Tenino.	8,388				19,082				1,487	
Washington Union Coal Co. Tono & Hanniford Mines			13,534	1	8,000				57,307	1
The County *										
Tonnage and lives lost at mines listed.....	8,388		13,534	1	25,772		15,482		20,741	1
	8,388		13,534	1	27,062		15,482		59,884	1
The State *										
Tonnage and lives lost at mines listed.....	2,846,901	13	3,290,923	22	3,722,439	27	2,977,490	25	3,590,689	29
	2,774,645	13	3,214,516	22	3,568,505	27	2,872,123	25	3,470,553	29

* This is the entire output for the county or State as the case may be. For the State the tonnage includes that of Whatcom county having no mine at which fatal accidents occurred. † 25,101 tons mined in October, November and December, 1906.

Northwestern Improvement Co.—No 7, One Elum	215,000	1	174,800	10	128,000	1	180,000	1	148,000	1
Northwestern Improvement Co.—One Elum Mines	307,000	1	157,744	1	150,000	1	161,100	1	145,000	1
Roslyn Fuel Company—Beekman No. 1	253,971	2	241,000	1	132,484	1	211,000	1	208,500	1
Roslyn Fuel Company—Beekman No. 2			11,000		47,515		131,500	1	61,515	
The County*	1,067,453	5	1,254,945	10	1,285,000	2	1,320,000	5	1,227,504	2
Tonnage and lives lost at mines listed	1,539,530	5	1,143,580	10	1,181,000	2	1,221,708	5	1,141,307	2
I. FUEL CONTINUED—										
)										
	50,000		44,000		24,000		32,000	1	7,100	
	30,000		57,445		70,000	1	65,000	1	42,400	
(Koplah Coal Co.	47,072		43,823		9,238		1,000		1,923	
			8,373	1	7,000		16,000	1	14,300	
					6,000		8,000	3	1,510	
The County*	172,219		108,801	1	127,000	1	140,000	6	57,550	
Tonnage and lives lost at mines listed	106,450		154,500	1	110,000	1	124,400	6	67,373	
	277,723	1	319,213	5	283,422	1	298,542	1	167,007	1
(Co.)	4,078		28,750		37,000		49,245	1	29,132	
	68,871	1	76,734	1	61,000	2	64,072	1	66,004	
	115,546		130,000		159,000	1	144,500		121,314	
	78,001		84,700		89,000		100,000	1	28,228	
	28,138		21,000				30,072		26,140	
	94,230	1			25,000		21,700		2,000	
Wilkeson Coal & Coke Co.—Wilkeson Mine	118,732	4	107,450	2	132,000		127,000	2	117,737	2
The County*	784,001	7	706,709	8	780,320	4	832,272	6	553,841	3
Tonnage and lives lost at mines listed	781,577	7	735,703	8	780,320	4	831,007	6	549,703	3
THURSTON COUNTY—										
Great Western Coal & Dev. Co. (King Coal Co.), Taelno										
Washington Union Coal Co.—Tono & Hanniford Mines	28,769		59,345		136,478		168,000		109,000	1
The County*	29,005		56,049		136,478		168,000		112,150	1
Tonnage and lives lost at mines listed	28,769		59,345		136,478		168,000		109,580	1
The State*	3,979,559	43	3,543,322	27	3,345,946	14	3,381,047	22	3,040,361	17
Tonnage and lives lost at mines listed	3,941,345	43	3,512,003	27	3,120,502	14	3,030,000	23	2,809,075	17

* This is the entire output for the county or State as the case may be. For the State the tonnage includes that of Whatcom county having no mine at which fatal accidents occurred.

Table Showing Short Tons Produced, Number of Lives Lost, Tons Mined Per Life Lost, Total Days Operated, Average Men Employed, Shifts (Days-Men) Per Life Lost, and Shifts (Days-Men) Operated, at the Mines Where Fatal Accidents Have Occurred During the Period 1905-1916.—Concluded.

NAME OF COMPANY OR MINE	1915		1916		1905-1916 †				
	Tonnage	Killed	Tonnage	Killed	Tonnage Mined Per Life Lost	Total Days Worked	Average Men Em- ployed	Men-Days Per Life Lost	Shifts (Men-Days)
CLALLAM COUNTY—									
Clallam Coal Co.—Foca Mine.....					6,677	798	21	16,716	16,716
Tonnage and lives lost at mines listed.....					6,677			16,716	
KING COUNTY—									
Carbon Coal Company—Nolte Spur.....					134,654				69,741
Carbon Coal & Clay Co. (Green River Coal Co.).....	50,397	1	58,671		443,379		43	34,870	213,566
Central Coal Co.—Grand Ridge Mine.....			24,097		249,764		91	71,319	102,317
Deputy-Renton Clay & Coal Co.—Renton.....			7,480		60,653		71	27,842	55,085
Deputy-Renton Clay & Coal Co.—Taylor Mines.....	21,380		30,892	1	425,297		52	49,186	147,558
Hyde Coal Company (Rose-Marshall Coal Co.).....			16,596		73,889		44	17,984	35,969
Durham Colliery Company—Mines 1 and 2.....	18,854		39,888	2	58,742		49	11,015	22,031
National Coal Co. (Sunset (C. I. M. Co.)) (Deep Creek).....	9,326		14,800		82,328		36	45,829	45,829
Northwestern Improvement Co.—Ravendale.....		32			1,737,768		268	15,892	682,865
Occidental Mine (P. Gibbons).....					942,567		45	82,119	96,586
Pacific Coast Coal Co.—No. 14.....	44,512				1,032,221		155	56,949	419,643
Pacific Coast Coal Co.—Morgan Slope (No. 11).....	133,686		206,975		2,724,740		373	42,028	1,124,618
Pacific Coast Coal Co.—Lawson.....					394,227		156	14,253	256,552
Pacific Coast Coal Co.—Gem, Franklin.....					464,563		152	46,245	138,736
Pacific Coast Coal Co.—Cannon—Franklin.....	5,180				161,527		132	17,966	35,912
Pacific Coast Coal Co.—Franklin No. 1.....					286,112		123	17,868	107,180
Pacific Coast Coal Co.—No. 7.....					130,580		84	27,697	55,214
Pacific Coast Coal Co.—Ford (New Castle).....	238,343		301,663	2	2,750,669		243	51,356	734,290
Pacohantas Coal & Coke Co. (Big 6) (Cannel C. Co.).....	22,921		11,923		47,597		30	82,326	32,826
Isaquah & Superior Coal Mining Co. (Cannel C. Co.).....	40,271	1	42,511		259,048		188	128,501	128,501
Puget Sound Traction, L. & P. Co. (Electric Co.).....	130,948		132,263	1	138,268		268	60,734	836,508
The County *.....	844,066	35	889,275	6	13,745,076		1,928	37,314	3,488,156
Tonnage and lives lost at mines listed.....	889,108	35	888,487	6	13,477,129				5,301,967
KITTITAS COUNTY—									
Northwestern Imp. Co.—2, 4, 6 and Dip Mines.....	140,457		241,611	2	5,589,307		768	46,508	1,594,588
Northwestern Imp. Co.—No. 3, Ronald.....	180,703		188,681	15	1,548,820		207	50,261	414,327
Northwestern Imp. Co.—No. 7, Cle Elum.....	114,063		196,143	6	1,427,686		215	68,711	392,295

Northwestern Imp. Co. Cle Elum Mines.....	80,012	136,908	1	2,981,404	8	370,175	2,884	370	117,185	987,484
Roslyn Fuel Company Beckman No. 1.....	190,887	132,008	1	1,596,028	6	254,897	2,773	177	67,000	402,534
Roslyn Fuel Company Beckman No. 2.....	61,315	116,324	1	430,520	1	480,320	1,100	48	59,847	90,847
The County *	870,082	1,816,908	6	16,114,676	92	175,189	2,586	1,906	54,977	5,087,900
Tonnage and lives lost at mines listed.....	784,397	1,214,440	6	16,186,920	92					4,786,862
LEWIS COUNTY—										
The County *										
Tonnage and lives lost at mines listed.....										
PIROUE COUNTY—										
Carbon Hill Coal Co.—Carbonado Mines.....	199,469	249,124	2	2,883,616	22	151,073	3,403	453	70,175	1,543,858
Gale Creek C. M. Co. (Tremont) (W. Tacoma Co.)	19,585	32,018	...	377,831	8	125,944	2,951	71	70,791	212,878
Northwestern Imp. Co.—Melmont Mine.....	18,146	...	...	665,551	9	77,938	2,942	58	31,961	287,876
Pacific Coast Coal Co. (S. Prairie) Burnett Mine	84,461	96,822	3	1,241,146	5	248,339	8,243	207	134,677	672,897
South Willis Coal Co. (American) (Coast) Spiketon	17,743	28,417	...	489,246	3	161,082	2,085	143	99,741	299,223
The Fairfax Mine Inc. (Tacoma Smelting Co.)	20,034	16,108	...	238,400	4	59,000	3,163	74	38,699	244,673
Su. Willis Coal Co. (Commonwealth) (Gale Creek)	1,185	4,104	...	209,605	1	209,605	1,616	54	69,910	86,910
Northwestern Iron & Steel (Masbell) Ashford Mine	...	...	...	655	2	327	1,658	17	14,392	28,525
Wilkeson Coal & Coke Co. Wilkeson Mines.....	110,425	108,337	2	1,264,325	18	70,240	3,281	204	37,226	670,049
The County *	488,693	583,182	7	7,498,623	67	111,919	3,202	1,292	61,760	4,187,920
Tonnage and lives lost at mines listed.....	471,948	523,950	7	7,394,376	67					4,066,879
THURSTON COUNTY—										
Git. Western Coal & D. Co. (King Coal Co.) Tonino	...	...	...	42,416	1	42,416	560	54	28,790	28,790
Wash. Union Coal Co.—Tono & Hanniford Mines.	112,000	165,066	1	905,780	4	230,445	1,748	106	47,371	189,499
The County *	112,000	165,066	1	905,683	5	138,136	1,965	117	46,023	230,116
Tonnage and lives lost at mines listed.....	112,000	165,066	1	948,196	5					218,576
The State *	2,409,331	3,019,600	21	39,608,762	325	121,868	2,766	5,556	47,624	15,477,906
Tonnage and lives lost at mines listed.....	2,239,615	2,859,152	21	38,021,144	325					14,638,692

* This is the entire output for the county or State as the case may be. For the State the tonnage includes that of Whatcom county having no mine at which fatal accidents occurred.

† The total shifts (men-days) at es for the period 1906-1918 is shown in the table. The year is the product of the average number of men i
 ‡ The total number of days worked. The
 § The total days operated at each mine is the sum
 ¶ was found by dividing the total shifts by the tota
 ** age number of men at each mine for
 *** in the counties and State was found
 **** rege days worked each year, and the average numb
 ***** rked.

Table Showing Short Tons Produced, Total Days Operated, Average Men Employed, and Total Shifts (Men-Days) Worked at the Mines Where No Fatal Accidents Have Occurred During the Period 1905-1916.—Concluded.

NAME OF COMPANY OR MINE	1913	1914	1915	1916	1905-1916			
	Tonnage	Tonnage	Tonnage	Tonnage	Tonnage	Days Worked	Average Number Employed	Shifts (Men-Days)
.....ed)	10,857	11,008	9,417	14,377	47,354	1,308	13	16,882
.....)	1,737	378	* 2,000	1,700	1,700	135	4	500
.....)	.....	.....	.....	.....	2,112	90	22	2,103
.....)	.....	.....	.....	.....	17,335	641	8	7,117
.....)	.....	.....	.....	.....	33,697	745	28	23,141
.....)	.....	.....	.....	.....	5,500	475	5	2,400
Tonnage of mines listed.....	24,103	20,135	26,193	41,882	179,846	.....	.....	75,335
PIERCE COUNTY—								
Wash. Manganese Coal & Cop'r Co. (Evans Creek) (Montezuma)	805	4,138	16,745	4,212	36,940	1,548	51	78,973
Pacific Coal & Oil Company (Seal)	.....	.....	.....	.....	11,330	700	26	19,593
Black Carbon Coal Company (Luzon Coal Co.)	.....	.....	.....	.....	5,089	513	27	2,259
Brier Hill Coal Company	.....	.....	.....	.....	1,080	140	9	1,300
Tonnage of mines listed.....	805	4,138	16,745	4,212	104,345	.....	.....	108,041
.....lastic Coal Co.)	.....	2,000	.....	.....	3,179	377	9	3,522
.....(Tenino Coal & Iron Co.)	.....	.....	.....	.....	11,215	449	13	5,703
.....)	.....	.....	.....	.....	3,039	223	10	2,515
Tonnage of mines listed.....	.....	2,000	.....	.....	17,487	.....	.....	11,840
WHEATCORN COUNTY—								
Whatecom County Coal Company—Blue Canyon Mine.....	7,325	6,002	6,355	5,939	55,324	2,753	27	75,379
Tonnage of mines listed.....	7,325	6,002	6,355	5,939	55,324	.....	.....	75,379
COWLITZ COUNTY—								
Cardiff Coal Company—Consumer Mine at Kalso.....	.....	.....	.....	.....	.....	.....	20	.....
THE STATE—								
Tonnage of mines listed.....	301,027	149,093	169,716	169,645	1,382,615	.....	.....	779,301

* Tonnage given only for this year.

PRODUCTION OF COAL IN WASHINGTON, 1900-1916, BY COUNTIES, IN SHORT TONS.

COUNTY	1900	1901	1902	1903	1904	1905	1906	1907	1908
Challam	900,506	905,229	1,038,217	1,316,000	1,116,377	1,026,856	1,326,894	300	2,992
King	867,904	1,005,067	1,252,454	1,376,017	1,389,603	1,379,696	1,406,638	1,446,068	916,572
Kittitas	503,005	576,091	401,091	1,800	1,983	4,500	39,000	1,564,421	1,411,963
Lewis	10,430	12,048	19,017	373,286	514,570	455,524	488,882	101,275	58,275
Pierce	48,200	8,200	6,010	19,250	10,650	8,983	13,534	612,539	632,400
Skagit				1,000	15,000			23,772	16,032
Thurston				600				3,160	18,983
Whatecom									
Totals	2,418,084	2,466,190	2,690,789	3,290,468	2,996,689	2,846,901	3,200,523	3,722,433	2,977,400
Total value	\$4,425,002	\$4,856,394	\$6,300,554	\$6,380,936	\$5,697,402	\$5,779,209	\$6,021,187	\$7,706,800	\$6,054,002

* This table has been very carefully compiled from the Mine Inspectors' Reports and checked by adding the tonnage at the individual mines.

Production of Coal in Washington, 1900-1916, by Counties, in Short Tons.—Concluded.

COUNTY	1900	1910	1911	1912	1913	1914	1915	1916	Increase or Decrease, 1916
Challam	2,702	650							
King	1,215,828	1,311,870	1,241,683	1,050,953	1,369,274	1,042,607	844,005	689,275	-144,909
Kittitas	1,560,500	1,667,453	1,254,845	1,235,670	1,330,530	1,237,504	879,002	1,316,983	-147,961
Lewis	101,451	172,219	158,801	127,992	148,502	67,568	78,250	109,121	-30,892
Pierce	615,285	784,961	795,768	789,320	832,272	533,841	488,003	538,162	-144,409
Skagit									
Thurston	90,741	29,005	96,840	136,478	153,686	112,180	112,003	105,066	-38,999
Whatecom	14,682	12,415	3,476	6,623	7,365	6,602	6,255	5,989	-272
Totals	3,500,639	3,979,599	3,348,922	3,346,946	3,931,047	3,040,361	2,409,331	3,019,800	-1510,309
Total value	\$9,245,305	\$10,206,400	\$8,507,394	\$8,122,572	\$9,965,392	\$7,142,084	\$5,908,524	\$7,165,317	-141,761,792

No. 7 Mine Tipple, Northwestern Improvement Co., Cle Elum, Wash.

Snow Sheds, Cle Elum Mine, Northwestern Improvement Co., Cle Elum, Wash

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PRODUCTION OF COAL IN WASHINGTON, 1860-1916, IN SHORT TON.*

Year	Quantity	Year	Quantity	Year	Quantity	Year	Quantity	Year	Quantity
1860	5,374	1870	17,344	1880	145,015	1890	1,263,689	1900	2,418,084
1861	6,000	1871	20,000	1881	107,000	1891	1,066,249	1901	2,466,190
1862	7,000	1872	23,000	1882	177,340	1892	1,140,875	1902	2,690,789
1863	8,000	1873	26,000	1883	214,980	1893	1,208,860	1903	2,890,488
1864	10,000	1874	30,332	1884	305,036	1894	1,131,660	1904	2,968,633
1865	12,000	1875	30,568	1885	330,250	1895	1,163,737	1905	2,846,901
1866	13,000	1876	110,342	1886	423,725	1896	1,202,354	1906	3,230,523
1867	14,500	1877	120,806	1887	772,601	1897	1,330,182	1907	3,722,433
1868	15,000	1878	131,600	1888	1,215,730	1898	1,775,257	1908	2,977,400
1869	16,300	1879	142,666	1889	1,080,578	1899	1,917,607	1909	3,560,639
								Total	72,240,613

* From Mine Inspectors' Reports. Typographical errors appearing in former reports have been corrected. 1890-1891, inclusive, are taken from U. S. G. S. Reports.

SUMMARY FOR THE YEARS 1900-1916.*

YEAR	Total Coal Production in Short Tons	Total Value at Mine	Average Value Per Ton at Mine	Total Coal Production in Short Tons	Total Value of Coke at Mine	Average Value of Coke Per Ton	Total Number of Inside Employees	Total Number of Outside Employees	Total Number of Employees	Average Tons Per Man Per Year
1900	2,418,084	\$4,426,002	\$1.83	35,421	\$176,012	\$4.90	5,447	791	4,236	570
1901	2,466,190	4,803,394	1.97	49,197	245,685	5.00	3,945	851	4,836	611
1902	2,690,789	5,300,864	1.97	40,889	202,845	5.00	3,515	889	4,844	619
1903	2,890,488	6,590,896	2.00	47,306	239,660	5.00	3,936	940	4,976	674
1904	2,968,633	5,637,402	1.90	46,175	230,876	5.00	3,743	865	4,638	647
1905	2,846,901	5,779,209	2.06	30,972	242,117	4.75	4,080	895	4,973	572
1906	3,230,523	6,021,157	1.89	44,944	215,731	4.80	3,929	1,203	5,227	630
1907	3,722,433	7,706,890	2.07	49,795	306,350	6.19	4,505	1,258	6,119	640
1908	2,977,400	6,054,002	2.08	37,931	205,595	5.50	4,270	1,071	5,341	567
1909	3,560,639	9,245,895	2.57	42,335	232,887	5.50	4,420	1,306	5,725	627
1910	3,979,589	10,296,400	2.59	58,715	322,982	5.50	4,669	1,433	6,121	630
1911	3,546,322	8,507,354	2.44	40,301	235,948	5.84	4,398	1,303	5,781	612
1912	3,849,043	8,122,572	2.43	48,889	270,789	5.54	4,302	1,311	5,623	630
1913	3,831,647	9,955,362	2.60	75,732	425,632	5.62	4,711	1,354	6,065	662
1914	3,040,361	7,143,054	2.35	78,973	404,136	5.15	4,338	1,264	5,647	555
1915	2,409,382	5,326,524	2.24	38,855	171,782	5.53	3,638	1,145	4,393	496
1916	3,019,600	7,155,317	2.37	96,722	457,270	5.20	3,506	1,100	4,746	636

Summary for the Years 1900-1916.—Concluded.

YEAR	Average Daily Output Per Man	Number of Days Worked (Average)	Number of Fatal Accidents	Number of Non-Fatal Accidents	Number of Widows	Number of Orphans	Death Rate Per 1,000 Employees	Non-Fatal Accidents Per 1,000 Employees	Tons Mined Per Life Lost	Tons Mined Per Non-Fatal Accident
1900.	2.43	236	33	73	16	33	7.79	13.4	73,273	31,000
1901.	2.45	257	27	32	4	11	5.99	16.9	91,340	30,075
1902.	2.36	270	34	64	12	23	7.92	12.4	79,141	49,829
1903.	2.56	218	25	39	9	30	5.13	17.9	131,613	39,644
1904.	2.54	247	31	54	14	27	6.69	11.6	96,731	55,030
1905.	2.43	236	13	30	7	17	2.61	13.1	218,935	31,632
1906.	2.45	257	22	70	7	5	4.21	14.5	149,569	43,306
1907.	2.36	270	37	93	15	34	6.05	14.0	100,805	37,034
1908.	2.56	218	26	79	7	19	4.63	14.7	119,039	37,639
1909.	2.54	247	39	136	22	61	6.61	22.8	92,057	35,401
1910.	2.46	234	43	103	13	33	7.02	17.6	92,545	35,847
1911.	2.62	234	27	115	14	49	4.67	19.7	131,419	39,355
1912.	2.63	225	14	455	7	19	2.46	30.2	239,035	7,356
1913.	2.52	251	22	773	8	13	3.62	127.4	174,165	4,966
1914.	2.49	200	17	361	9	39	3.01	147.4	178,845	3,959
1915.	3.01	163	45	703	23	39	9.32	146.2	53,540	3,413
1916.	3.91	215	21	1,035	15	46	4.43	213.1	143,700	2,915

OPERATING COMPANIES WITH NAMES OF OFFICERS AND MINING ENGINEERS FOR THE YEAR 1910.

NAME OF COMPANY—HOME ADDRESS

Name of Mins	President	Manager	Mining Engineers
KING COUNTY—			
ib.....	Grand Bldg.	M. B. Daly.....	H. L. Hawkins.....
Carbon.....	Carbon.....	D. S. Hanley.....	H. L. Handley.....
Daly.....	Daly.....	D. S. Hanley.....	H. L. Handley.....
E., Seattle, Wash.	Taylor.....	John F. Keenan.....	.....
E., Seattle, Wash.	Denny-Renton.....	John F. Keenan.....	.....
.....	Nos. 1 and 2.....	.....	.....
.....	Hyde.....	Philip Rowe.....	G. W. Evans.....
.....	Issaquah.....	P. O. Kettle.....	.....
Seattle, Wash.	Nos. 1 and 3.....	Stephen H. Green.....	J. R. Linton.....
.....	Navy.....	W. J. Bobo.....	W. J. Wood.....
ash.....	No. 11.....	Wm. Hann.....	N. D. Moore.....
Pacific Coast Coal Company, Black Diamond, Wash.	Ford.....	Wm. Hann.....	N. D. Moore.....
Pocahontas Coal and Coke Company, Palmer, Wash.	Pocahontas.....	J. B. Miller.....	.....
Puget Sound Traction, Light and Power Company, Seattle, Wash.	Renton.....	A. W. Leonard.....	M. E. Clark.....
KITTITAS COUNTY—			
Independent Coal and Coke Company, White Bldg., Seattle, Wash.	No. 1.....	Prescott Oakes.....	Fred Bianco.....
Northwestern Improvement Company, N. P. Bldg., Tacoma, Wash.	No. 6.....	J. M. Hanniford.....	George Reig.....
Northwestern Improvement Company, N. P. Bldg., Tacoma, Wash.	No. 8.....	J. M. Hanniford.....	George Reig.....
Northwestern Improvement Company, N. P. Bldg., Tacoma, Wash.	No. 5.....	J. M. Hanniford.....	George Reig.....
Northwestern Improvement Company, N. P. Bldg., Tacoma, Wash.	No. 7.....	J. M. Hanniford.....	George Reig.....
Northwestern Improvement Company, N. P. Bldg., Tacoma, Wash.	Cle Elum.....	J. M. Hanniford.....	George Reig.....
Roslyn.....	No. 1.....	Francis P. Larabee.....	J. E. Ash.....
Roslyn.....	No. 2.....	see.....	J. E. Ash.....
Roslyn.....	Plant.....	Wm. Mackay.....	.....
Roslyn.....	No. 1.....	A. F. Plant.....	Fred Bianco.....
Roslyn Fuel Company, White Bldg., Seattle, Wash.	No. 2.....	O. E. Jones.....	Fred Bianco.....
Roslyn Fuel Company, White Bldg., Seattle, Wash.	Summit.....	O. E. Jones.....	Fred Bianco.....

Operating Companies With Names of Officers and Mining Engineers for the Year 1916.—Concluded.

NAME OF COMPANY—HOME ADDRESS		Name of Mine	President	Manager	Mining Engineer
LEWIS COUNTY—					
Centra.	Idaho.	Empress.	M. J. McGraw.		
East C	Idaho.	Ladd.	John Bagley.		
Fords	Idaho.	Fords Prairie	A. D. Foron.		
Mendot	Idaho, Wash.	Mendota	B. H. Johnston.	B. H. Johnston.	T. E. Martin.
Monarr	Idaho.	Monarch			
Sheldor	Idaho.	Sheldon.	W. D. Shelton.	W. F. West.	
Salzer	Idaho.	Salzer Valley			
Superio	Idaho.	Superior.	T. K. Campbell.		
PIERCE COUNTY—					
Carbon Hill Coal Company.	Carbonado, Wash.	Wingate.	Wm. H. Crocker.	J. F. Menzies.	John Harvey.
Carbon Hill Coal Company.	Carbonado, Wash.	Miller.	Wm. H. Crocker.	J. F. Menzies.	John Harvey.
Carbon Hill Coal Company.	Carbonado, Wash.	Electric Slope.	Wm. H. Crocker.	J. F. Menzies.	John Harvey.
Carbon Hill Coal Company.	Carbonado, Wash.	Carbon.	Wm. H. Crocker.	J. F. Menzies.	John Harvey.
Carbon Hill Coal Company.	Carbonado, Wash.	No. 5.	Wm. H. Crocker.	J. F. Menzies.	John Harvey.
Carbon Hill Coal Company.	Carbonado, Wash.	Douty.	Wm. H. Crocker.	J. F. Menzies.	John Harvey.
Gale Creek Coal Mines Company.	Tacoma, Wash.	Gale Creek.	Henry Hewitt, Jr.		O. L. White.
		Burnett.	E. Ward.	Wm. Hann.	N. D. Moore.
		No. 10.	Abe Morris.	Abe Morris.	
		Champion.	Abe Morris.	Abe Morris.	
		Fairfax.	W. R. Rust.		
	Tacoma, Wash.	Montezuma.	H. O. Marcy.	W. H. Rowe.	
		Wilkearn.	Henry Hewitt.		C. L. White.
THURSTON COUNTY—					
Washington Union Coal Company.	Tono, Wash.	Tono No. 1.	F. A. Manley.	F. A. Manley.	R. B. Ober.
WHATCOM COUNTY—					
Whatcom County Coal Co., R. F. D. No. 3, Box 22, Bellingham, Wash.		Blue Canyon.			

OPERATING COMPANIES WITH NAMES OF SUPERINTENDENTS AND FOREMEN FOR THE YEAR 1916.

NAME OF COMPANY—HOME ADDRESS

	Superintendent	Mine Foreman	Outside Foreman	P. O. Address—Mine
KING COUNTY—				
Andrew Kennedy, Coleman Building, Seattle, Wash.	L. J. Harris	John Reynolds	E. Emanuel	Issaquah, Wash.
Carbon Coal and Clay Company, Bayne, Wash.	H. L. Handley	Henry Gunnell		Bayne, Wash.
ig., Seattle, Wash.	H. L. Handley	Albert Lane		Bayne, Wash.
ig., Seattle, Wash.	Wm. Lawton	Paul Wilker	Martin Jorgenson	Taylor, Wash.
	J. E. Kendtner			Renton, Wash.
	John Morgan	John Morgan	Jos. Bennett	
	Samuel Hyde	Jas. Sears	J. F. Schwellert	
	P. C. Kettle	J. H. Davis		
Seattle, Wash.	Edwin Husband	Geo. Stonebridge		
h.	D. W. Watkins	Jacob Andrus	Alvo Watkins	
ash. (No. 11)	R. Christensen	Ben Allen and	Joseph Upton	
		M. A. Morgan		uh.
Pacific Coast Coal Company, Black Diamond, Wash. (Ford)	J. J. Jones	George Clark and	Sam Peterson	New Castle, Wash.
		F. Landstrom		
Porahontas Coal and Coke Company, Palmer, Wash.	J. E. Kendtner	Ralph Lawrie		Palmer, Wash.
Puget Sound Traction, Light and Power Company, Seattle, Wash.	L. D. Jones	John Morgan	D. C. Williams	Renton, Wash.
KITTITAS COUNTY—				
Independent Coal and Coke Company, White Bldg., Seattle, Wash	Robt. Scoble, Jr.	Wm. Galloway		Cle Elum, Wash.
Northwestern Imp. Co., N. P. Bldg., Tacoma, Wash. (No. 4)	Peter Bagley	Geo. Morris	W. J. Thompson	Roslyn, Wash.
Northwestern Imp. Co., N. P. Bldg., Tacoma, Wash. (No. 8)	Peter Bagley	Thos. Ramsay	W. J. Thompson	Roslyn, Wash.
Northwestern Imp. Co., N. P. Bldg., Tacoma, Wash. (No. 5)	Peter Bagley	F. G. Richards	E. T. Lannigan	Roslyn, Wash.
Northwestern Imp. Co., N. P. Bldg., Tacoma, Wash. (No. 7)	Arthur Hodder	J. H. Pearce	E. T. Lannigan	Cle Elum, Wash.
Northwestern Imp. Co., N. P. Bldg., Tacoma, Wash. (Cle Elum)	Arthur Hodder	C. F. Smith	E. T. Lannigan	Cle Elum, Wash.
Roslyn Cascade Coal Company, South Bellingham, Wash	Wm. Mackay	Robt. Scoble, Sr.		Roslyn, Wash.
Roslyn Coal and Coke Company, South Bellingham, Wash	Wm. Mackay	Jas. Ash		Roslyn, Wash.
Roslyn Coal and Coke Company, Roslyn, Wash.	A. F. Plant	Wm. Mace		Roslyn, Wash.
Roslyn Fuel Company, White Bldg., Seattle, Wash. (No. 1)	Wm. Shaw	Thos. Miller	Harry Munsey	Roslyn, Wash.
Roslyn Fuel Company, White Bldg., Seattle, Wash. (No. 2)	Wm. Shaw	David Bowie	Harry Munsey	Roslyn, Wash.
Roslyn Fuel Company, White Bldg., Seattle, Wash. (Summit)	Robt. Scoble, Jr.			Cle Elum, Wash.

Operating Companies With Names of Superintendents and Foremen for the Year 1916.—Concluded.

NAME OF COMPANY—HOME ADDRESS	Superintendent		P. O. Address—Mine
Centralia, Wash.	E. H. Morgan	John Meeko	Centralia Wash
Ladd, Wash.		Rudolph Tarrach	
Y, Centralia, Wash.		T. E. Martin	Homer Johnston
Company, Centralia, Wash.		J. E. Parkin	
Centralia, Wash.		B. H. Sheldon	
Centralia, Wash.	B. H. Sheldon		
Salzer Valley Coal Company, Centralia, Wash.	Marion Howell		
Superior Coal Company, Onehalla, Wash.	T. B. Campbell	R. A. Graham	Onehalla, Wash.
PIERCE COUNTY—			
Carbon Hill Coal Company, Carbonado, Wash. (Wingate)	Fred Jarrett	Fred Jarrett	Carbonado, Wash.
Carbon Hill Coal Company, Carbonado, Wash. (Miller)	Fred Jarrett	Joe Foster	
Carbon Hill Coal Company, Carbonado, Wash. (Electric Slope)	Fred Jarrett	G. W. Love	
Carbon Hill Coal Company, Carbonado, Wash. (Carbon)	Fred Jarrett	Evan Jones	
Carbon Hill Coal Company, Carbonado, Wash. (No. 5)		D. P. Davies	
Carbon Hill Coal Company, Carbonado, Wash. (Douty)		Dave Roberts	
		Robt. Cox	
		Arthur Jones	Carl Swinland
	Frank Merritt	James Webb	
	Jonas Morris	Jonas Morris	
	G. E. Rockefeller	A. Taka	M. D. Jones
Tacoma, Wash.	George Savage		
	J. T. Lee	Frank Angelino	
THURSTON COUNTY—			
Washington Union Coal Company, Tono, Wash.	E. B. Brooks	Chas. Friend	Tono, Wash.
WEATCOM COUNTY—			
Whatcom County Coal Co., R. F. D. No. 3, Box 29, Bellingham, Wash.	Andrew Eckland		R. F. D. No. 3, Bellingham

NEW EQUIPMENT AND DEVELOPMENT WORK FOR THE YEAR 1916.

KING COUNTY.

Andrew Kennedy Company, Issaquah.

Has driven 800 feet of gangway in No. 9 seam and 200 feet of gangway in No. 3 seam. Has driven 850 feet of rock tunnel to overlying seams and 150 feet of rock tunnel to connect No. 3 and No. 9 seams. Has installed the following: One Lidgerwood 150-horsepower electric hoist, one eight-ton General Electric haulage motor for inside use; one 40-horsepower motor generator set; one 100-horsepower motor of compressor, one 22-horsepower motor on fan, and one two-stage centrifugal pump and 40-horsepower motor.

Carbon Coal & Clay Company, Bayne.

Has driven 600 feet in carbon gangway, 300 feet of slope gangway, 155 feet of slope rock tunnel, 640 feet of rock tunnel in Carbon mine, and 130 feet of prospect entry. Has opened Carbon water level and is driving rock tunnel to No. 3 seam on first sub-level in Daly mine. Has installed the following: One 7x6 air compressor, one 8x8 air compressor, and two Ingersoll jackhammer air drills.

Denny-Renton Clay & Coal Company.

At Taylor mine, has driven 500 feet of gangway. At Renton mine, has driven 869 feet of gangway.

Durham Colliery Company, Durham.

At No. 1 mine has driven 500 feet of gangway and has installed one 3'x2' steam-driven Sirrocco blower fan.

Hyde Coal Company, Cumberland.

Has driven about 400 feet of gangway. Commenced to operate in July of this year.

King Coal Company, Issaquah.

Has driven 289 feet of gangway on the Alvo seam, 165 feet of gangway on No. 5 lower level, and 70 feet of gangway on the Muldoon seam. Has opened No. 5 lower level.

National Coal Company, Cumberland.

Has driven 500 feet of gangway in No. 1 left of No. 2 slope and 478 feet of gangway in No. 0 water level. Has driven 453 feet of slope on No. 1. Old No. 6 mine (old name Independent slope) has been pumped out and mine is being reopened. Practically all work done during year has been of a development nature.

Ozark Coal Company, Cumberland.

Has driven 1,000 feet of gangway. Has driven 400 feet of rock tunnel for prospecting the underlying seams below Navy seam. Has installed the following: One six-foot open face fan, one 25-horsepower motor for fan; one 35-horsepower motor for sawmill also installed; one 30-horsepower air compressor 8x8 of Fairbanks & Morse type; one 40-horsepower motor to operate bunker machinery, and is installing one 45-horsepower electric hoist on navy seam.

Pacific Coast Coal Company.

At No. 11 mine, has driven 10,488 feet of gangway and installed a fine coal and nut coal washery.

At Ford mine, has driven 32,838 feet of gangway and 915 feet of rock tunnel.

Pocahontas Coal and Coke Company, Palmer.

Has driven 500 feet of gangway. Has installed the following: One Blair washer; one mine fan, Western Blower Company, and two six-ton larry cars.

Puget Sound Traction, Light & Power Company, Renton.

Has driven 6,234 feet of gangway.

KITTITAS COUNTY.**Independent Coal & Coke Company, Cle Elum.**

Has driven 745 feet of entry, 370 feet of airway, 688 feet of rock slope, 878 feet of coal slope, and 717 feet of temporary airway. The above company drove 688 feet of rock slope at thirty degrees dip to tap the workings of the old Cle Elum shaft, the slope being 9'x6'6". Installed the following: One set of Litchfield first motion engines, 24"x40"; three B. & W. water tube boilers, 550-horsepower; one generator set at power plant, 125 amperes, 440 volts, alternating current. The machine shop was equipped with lathe-pipe machine, drill presses, etc. The tippie equipped with gravity rotary dumps capable of handling 1,200 tons daily, also bucket conveyor from tippie to bunker. The capacity of bunker is 350 tons. Coal is prepared in four sizes, viz.: Lump, egg, nut and steam. Boilers so located that boilers use nothing but steam coal. A shaking screen was installed in tippie and a revolving screen at bunkers. Two new electric Allis-Chalmers centrifugal pumps are being installed and will have a capacity of 600 gallons at 460 feet head.

Northwestern Improvement Company.

At No. 3 mine, has driven 776 feet of entry in fifth east, 655 feet of entry in seventh east, 280 feet of entry in sixth west, 181 feet of entry in seventh west, and 455 feet of entry in the fourth east counter

Entrance to Slope, Independent Coal & Coke Co., Cle Elum, Wash.

New Plant, Independent Coal & Coke Co., Cle Elum, Wash.



on the hill (total 2,347 feet). Has driven 305 feet of main slope, 324 feet of slope manway on east side, and 172 feet of manway on west side; has driven 190 feet of return airway on the east side of slope and 324 feet on the west side. Has opened the big seam overlying the Roslyn as follows: Haulage rock tunnel, 180 feet; slope, 213 feet; slope manway, 183 feet; water level entry, east, 70 feet, and water level entry, west, 117 feet. Progress in development of Roslyn seam was impeded by the faulted and otherwise abnormal condition of the formation traversed by the main slope, fifth and seventh east levels.

At No. 5 mine, has driven 377 feet of fifth east dip entry, 176 feet of entry in first level off fifth east dip entry, 179 feet of seventh east counter No. 2, 175 feet of seventh east counter No. 3, 984 feet of $7\frac{1}{2}$ east entry, 124 feet of $7\frac{1}{2}$ east counter, 866 feet of eighth east entry, 620 feet of eighth east counter No. 1, 207 feet of eighth east counter No. 2, 1,122 feet of seventh west entry, 506 feet of seventh west counter, 483 feet of water level entry (east), and 80 feet of boiler fuel entry, a total of 5,899 feet. The haulage tunnel was regraded to drain water. Has installed one set of boilers, two new pumps, and new tippie, and dump house has been altered.

At No. 6 mine, has driven 477 feet of rope entry (engine plane), 536 feet landing for rope haulage division, 864 feet of entry in fourth east, 350 feet of entry in eighth east, 1,641 feet of entry in ninth east, and 674 feet of entry in second west, a total of 4,542 feet. Has driven 228 feet of auxiliary slope in seventh east. A wooden trestle 325 feet long and averaging 45 feet in height was built across ravine to facilitate the extension of the fourth east level.

At No. 7 mine, has driven 582 feet of entry in the seventh east, 734 feet of entry in the $4\frac{1}{2}$ west, 486 feet of entry in $4\frac{1}{2}$ west No. 2, 31 feet in fifth west entry, 490 feet of entry in sixth west, and 2,077 feet of entry in eighth west, a total of 4,400 feet. Has driven 695 feet of slope manway and 755 feet of slope return airway.

At No. 7 extension, has driven 266 feet of entry in first east, 206 feet of entry in second east, 359 feet of entry in first west, and 80 feet of entry in second west, a total of 911 feet. Has driven 982 feet of haulage plane and 987 feet of haulage plane manway. Has installed one four-foot disc fan driven by 10-horsepower General Electric motor, 500 volts, direct current, and is belt-driven; one shop-made electric hoist, 11-horsepower, 500 volts, and one shop-made electric hoist, 17-horsepower, 500 volts.

At No. 8 mine, has driven 1,030 feet of rock tunnel toward seam and is to be used for haulage purposes. Has built 1,300 feet of wooden trestle for counterbalanced double track on line of outside plane, average height 30 feet, maximum height 65 feet; 4,200 feet of roadway for double track has been graded on line of plane; and 7,200 feet

of single track from No. 2 tipple to mouth of tunnel has been laid on the line of the plane.

At the Cle Elum mine, has driven 510 feet of auxilliary slope in the seventh west, No. 3 extension.

Roslyn Coal and Coke Company, Roslyn.

Has driven 486 feet of entry and 40 feet of slope. Has installed one gas pump.

Roslyn Cascade Coal Company, Roslyn.

Has driven 394 feet of rope entry, 564 feet of entry in second east, 167 feet of entry in third east, and 108 feet of entry in third west, in No. 1 mine.

At No. 2 mine, has driven 273 feet of slope and 797 feet of entry.

Roslyn Fuel Company, Beekman.

At No. 1 mine, has installed one 400-gallon-per-minute, 500-foot head centrifugal pump, direct connection to 75-horsepower alternating current motor.

At No. 2 mine, has driven 300 feet of entry and 300 feet of airway. Has installed one 400-gallon, 550-foot head centrifugal pump, direct connection to 100-horsepower alternating current motor.

At Summit mine, has driven 300 feet of entry, 200 feet of slope, and 200 feet of airway.

LEWIS COUNTY.

Fords Prairie Coal Company, Centralla.

Has driven 450 feet of slope.

Mendota Coal & Coke Company, Mendota.

Has driven 460 feet of entry and 210 feet of slope.

Fan has been removed from the north to the south side of the slope.

Sheldon Coal Company, Chehalis.

Has constructed a new bunker.

Superior Coal Company, Chehalis.

Has driven 175 feet of gangway. Has timbered 260 feet of the slope. Aircourse has been cleaned and timbering repaired, and portions of the gangway retimbered.

PIERCE COUNTY.

Carbon Hill Coal Company, Carbonado.

At the Douty mine, has driven 440 feet of gangway in coal and 50 feet of same in rock. Has installed 2,300 feet of endless rope haul, electrically driven.

At the Wingate mine, has driven 503 feet of gangway on the fourth level; has driven 250 feet of gangway downstream and 138 feet of gangway upstream on the fifth level. A rock tunnel has been driven 385 feet on the fourth level. Has installed one centrifugal pump.

At No. 5 mine, has driven 650 feet of slope below water level and 100 feet above water level. Has installed one small electric-driven fan, one small electric-driven hoist, one small electric pump and a small air-driven pump.

At Carbon No. 6 (old No. 9), has driven 650 feet of gangway.

At the Miller mine, has driven 550 feet of rock gangway.

At the Electric Slope mine, has reopened 400 feet of old north 4 gangway.

Gale Creek Coal Mines Company, Wilkeson.

Has driven 1,400 feet of gangway.

Pacific Coast Coal Company, Burnett.

Has driven 8,847 feet of gangway and 2,577 feet of rock tunnel.

South Willis Coal Company.

At the Spiketon mine, has driven 600 feet of gangway south and 300 feet north on No. 10 seam.

At the South Willis mine, has reopened 1,000 feet of old gangway on the Champion seam.

The Fairfax Mine, Inc., Fairfax.

Has driven 1,100 feet of gangway, 1,700 feet of gangway as a prospect, and 3,465 feet of rock tunnel.

Wilkeson Coal and Coke Company, Wilkeson.

Has driven 1,500 feet of gangway and 760 feet of slope.

THURSTON COUNTY.

Washington Union Coal Company, Tono.

Has driven 4,038 feet of entry and 3,126 feet of airway.

TABLE SHOWING NAMES OF COMPANIES, POSTOFFICE ADDRESS, SHIPPING FACILITIES AND
PRINCIPAL MARKET.

List of Operating Companies	Postoffice Address	Shipping Facilities	Principal Market
Andrew Kennerly	Wash.	Northern Pacific Railway	Washington
Carbon Coal and Clay Company .....	..	N. P. Ry and O. M. & St. P. Ry.	Washington
Carbon Hill Coal Company. ....	..	Northern Pacific Railway	Washington
Centrella Coal Mining Company. ....	..	Eastern R. R. & Lumber Co.	Washington and Oregon
Denny-Renton Clay and Coal Company	Wash.	C. & P. S. Ry.	Factory use
East Creek Coal Company	Wash.	Tacoma Eastern R. R.	Washington
Forda Prairie Coal Company .....	..	Northern Pacific Railway	Washington
Gale Creek Coal Mines Company. ....	..	Northern Pacific Railway	Washington and British Col.
Hyde Coal Company	Wash.	Northern Pacific Railway	Washington
Independent Coal and Coke Company. ....	..	Northern Pacific Railway	Washington
King Coal Company .....	..	Northern Pacific Railway	Puget Sound points
Mendota Coal and Coke Company .....	..	Centrella Eastern Ry. and N. P. Ry.	Washington and Oregon
Monarch Coal Company. ....	..	Eastern R. R. & Lumber Co.	Washington
National Coal Company.	Seattle	N. P. R. R. and C. M. & St. P. R. R.	Washington
Ozark Coal Mining Company. ....	..	Northern Pacific Railway	Seattle
Pacific Coast Coal Company.	Wash.	Columbia & Puget Sound R. R.	Washington
Pocahontas Coal and Coke Company. ....	..	Northern Pacific Railway	Seattle
Puget S .....	..	P. S. F. R. R. and N. P. R. R.	Washington
Northw .....	..	Northern Pacific Railway	Puget Sound cities
Roslyn .....	..	Northern Pacific Railway	Railroads only
Roslyn .....	..	Northern Pacific Railway	Eastern Washington
Roslyn .....	..	Northern Pacific Railway	Washington
Salzer	Wash.	By teams	Local
Sheldon Coal Company .....	..	Twin City Light & Power Co.	Local
Superior Coal Company .....	..	Northern Pacific Railway	
South Wills Coal Company. ....	..	Northern Pacific Railway	
The Fairfax Mine Incorporated. ....	..	Northern Pacific Railway	
Washington Manganese Coal & Copper Co .....	..	Northern Pacific Railway	
Washington Union Coal Company. ....	..	O. W. R. R. & N. Co.	
Whatcom County Coal Company.	Wash.	Northern Pacific Railway	
Wilkeson Coal and Coke Company.	Northern Pacific Railway	

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Lord and Others.—Analyses of Coals. Bulletin 22, Parts I and II.

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Reports of State Inspectors of Coal Mines of Washington, 1887-1916.

Reports prior to September 30, 1906, are not available, but later reports can be obtained from the State Mine Inspector, Alaska Bldg., Seattle, Wash., or the State Librarian, Olympia, Wash.

United States Geological Survey Publications.

Mineral Resources of the United States, 1883-1914.

Smith, E. Eggleston.—Coals of the State of Washington. Bulletin 474, 1911.

Willis, Bailey.—Some Coal Fields of Puget Sound. Eighteenth Annual Report, Part III, pp. 399-436, 1897.

Willis, Bailey, and Smith, George Otis.—Tacoma Folio, Geologic Atlas of United States, No. 54, 1899.

Mount Stuart Folio; Seattle Folio; Tacoma Folio; Snoqualmie Folio; and other folios pertinent to Washington.

Smith, George Otis.—Coal Fields of the Pacific Coast, Twenty-second Annual Report, Part III, pp. 473, 513, 1902.

Address, Director, United States Geological Survey, Washington, D. C.

Washington Geological Survey Publications.

Volume 2.—Annual Report for 1902. Part 1, The Building and Ornamental Stones of Washington, by S. Shedd; part 2, The Coal Deposits of Washington, by Henry Landes and C. A. Ruddy. Postage 20 cents.

Bulletin 3.—The Coal Fields of King County, by George W. Evans. Bound in cloth, price 75 cents.

Bulletin 9.—The Coal Fields of Kittitas County, by E. J. Saunders. Bound in cloth, price 60 cents; paper cover, price 40 cents.

Bulletin 10.—The Coal Fields of Pierce County, by Joseph Daniels. Bound in cloth, price 60 cents; paper cover, price 40 cents.

Bulletins.—The Mineral Resources of Washington, with statistics, by Henry Landes.

Address, State Librarian, Olympia, Wash.

Others.

Tenth Census of the United States, Volume XV.

COAL ANALYSES

The coal analyses accompanying this report are those made by the United States Geological Survey during the years 1909-1910 in cooperation with the coal division of the Washington Geological Survey and are taken from the United States Geological Survey Bulletin No. 474—Coals of the State of Washington.

The samples were gathered principally by Mr. E. E. Smith in the regular United States Geological Survey manner, crushed either in the mine or immediately after coming to the surface, then placed in a tin receptacle and sealed to exclude loss of moisture by air-drying.

Four sets of analyses were made, namely: (a) Coal as received; (b) coal air-dried; (c) coal moisture free; (d) percentage referred to coal moisture and ash free. The analyses given in this report are those on an air-dried basis, and by adding the percentage of air-drying loss (which is given in the table) to the percentage of moisture given, the moisture in the original coal can be determined within one per cent.

Since all the coal beds were sampled in the same manner, and the analyses and calorific values were determined in the same uniform manner, the analyses herein given give a fair comparison of the coal beds of the state.

RESULTS OF COAL ANALYSES. CLALLAM COUNTY.

COAL BED SAMPLED	Labo- ratory No.	Thick- ness of part sam- pled	Air drying loss of sample as re- ceived	CHEMICAL ANALYSIS								Value	
				Proximate				Ultimate					
				Mols- ture	Vol'ile matter	Fixed Carbon	Ash	Sul- phur	Hydro- gen	Oxy- gen	Calo- ries B. T. U.		
Fuca mine, Clallam..	1000	1' 11"	3.40	8.12	41.40	37.47	12.01	5.38	5.79	16.38	6331	10853	

KING COUNTY.

No 1 upper bn, Renton mine	9154	2' 1"	3.1	8.30	34.95	42.92	12.23	.52	5.30	19.45	10240
No 1 lower bn, Renton mine	9155	5' 3"	3.8	6.06	35.38	42.94	13.02	.47	5.41	20.86	10308
No 2 bed, Renton mine	9156	3' 8"	7.2	7.29	34.28	41.83	16.00	.73	5.17	19.45	10357
No 3 upper bn, Renton mine	9159	4' 2"	7.2	8.01	36.61	44.68	10.70	.47			10358
No 3 upper bn, Renton mine	9161	4' 7"	10.0	6.97	35.46	48.23	9.35	.41	5.66	19.72	11259
No 3 lower bn, Renton mine	9162	2' 8"	9.5	6.08	30.11	48.43	8.83	.60	5.64	19.87	11332
No 3 upper bn, Ford mine	9163	4' 5"	8.6	6.50	34.00	47.10	12.40	.39	5.30	19.25	10460
No 3 lower bn, Ford mine	9164	1' 8"	9.7	5.26	36.02	48.56	8.16	.47	5.32	18.89	11340
No 4 bed, Ford mine	9167	4' 7"	3.9	6.49	36.53	47.91	9.07	.41	5.53	19.33	11236
Muldoon bed, Ford mine	9168	4' 11"	7.2	6.33	37.39	42.56	13.73	.76	5.34	17.89	10735
Muldoon bed, Ford mine	9165	5' 5"	7.1	6.20	38.53	43.90	11.23	.59	5.43	17.82	11160
Bagley bed, No. 1 Bagley mine	9170	5' 9"	4.6	5.84	39.42	43.59	11.15	.36	5.38	19.38	11151
Bagley No. 2 upper bn, Bagley mine	9171	2'	7.5	4.89	41.87	38.56	14.68	4.00	5.41	14.02	11197
Bagley No. 2 lower bn, Bagley mine	9169	4'	4.3	5.21	39.74	42.98	12.07	.96	5.34	17.80	11162
No. 0, Lasaquah mine	8547	3' 2"	5.2	8.50	31.00	43.70	16.80	1.70			10810
mine	8548	6' 7"	5.2	7.90	30.00	46.10	16.00	.72	5.25	18.10	10900
mine	4542	4' 8"	8.0	10.70	32.00	47.20	10.00	.40			10880
mine	8543	4' 5"	6.6	9.06	31.43	59.51	12.15	1.20	5.27	20.70	10000
ge mine	8544	6' 7"	6.1	8.70	32.50	46.40	12.40	.39	5.42	20.25	10000
ge mine	8545	4'	8.9	10.33	33.67	37.55	18.40	.51			9497
Ridge mine	9253		8.5	10.42	36.53	37.61	15.30	.41	5.47	21.06	9922
aspect	9291	4' 2"	9.7	8.65	34.52	42.06	14.14	.41	5.23	21.26	10334
aspect	9289	2' 9"	8.5	4.41	30.61	49.78	15.20	2.59			11318
aspect	9290	3' 11"	6.9	2.73	30.07	35.40	11.80	.25			12006
	9178	2' 8"	4.0	3.47	38.21	43.20	16.12	1.39			11608

Taylor No. 3	9176	8'	6"	2.6	2.40	37.08	34.95	25.55	1.97	5.22	69.91	1.39	13.83	6706	10809
Taylor No. 4	9172	9'	6"	2.6	2.22	37.42	30.04	10.83	.88	5.08	65.07	1.64	10.67	7076	12737
Taylor No. 5	9174	8'	9"	2.8	2.05	36.44	45.81	15.30	.76	4.90	65.05	1.30	11.95	6748	12146
Taylor No. 6	9173	4'	7"	3.1	2.54	37.00	45.53	14.84	.97	5.18	64.21	1.45	15.57	6116	11009
Danville bed	9258	6'	7"	10.9	8.05	36.54	45.38	9.02	.57	5.46	65.80	1.59	16.18	6420	11507
No. 3 bed, No. 1, Ravensdale	9266	7'	6"	3.6	5.00	36.68	45.10	12.62	.90	5.10	60.18	1.50	10.13	6507	10815
No. 4 bed, No. 1, Ravensdale	9267	5'	6"	3.0	4.50	38.58	45.27	11.59	.53	5.24	61.05	1.50	10.36	6870	11482
No. 5 bed, No. 1, Ravensdale	9271	10'	10'	3.9	5.77	37.17	40.79	16.27	.73	5.30	63.71	1.47	16.90	6848	12323
No. 5 upper bn., No. 1 mine, Ravensdale	9272	3'	2"	4.0	5.19	36.42	40.68	17.28	.29	5.23	69.48	1.60	15.75	7078	12740
No. 5 lower bn., No. 1 mine, Ravensdale	9273	5'	7"	4.0	5.37	38.00	41.68	14.28	.30	5.72	70.32	1.81	15.51	6856	12548
No. 5 bed, No. 1 mine, Ravensdale	9274	4'	1"	2.9	3.40	38.28	44.00	12.32	.30	5.85	67.77	1.83	18.20	6700	12003
No. 5 bed, No. 1 mine, Ravensdale	9270	6'	0"	4.1	3.35	39.60	47.52	7.47	.37	5.57	70.06	1.46	10.20	7217	12901
McKay bed, McKay mine, Ravensdale	9277	2'	3"	2.9	4.55	41.51	47.95	3.99	.65	5.16	67.73	1.98	14.58	7178	12980
McKay bed, McKay mine, Ravensdale	9281	5'	2"	5.0	7.14	41.19	17.31	3.81	.31	5.24	68.08	1.40	15.50	6855	12330
McKay bed, McKay mine, Ravensdale	9283	3'	2"	5.5	6.69	36.28	30.75	5.97	.38	5.28	71.06	2.02	15.39	7294	13129
McKay bed, McKay mine, Ravensdale	9400	5'	7"	1.1	2.00	36.00	50.60	11.40	.41	5.67	74.80	1.63	12.73	7542	13276
Blk. D'nd	9106	5'	7"	4.0	2.25	41.94	50.21	5.00	.41	5.09	60.80	1.78	14.41	6674	12013
Blk. D'nd	9108	4'	7"	5.4	2.50	40.14	47.68	9.68	.47	5.05	65.11	1.51	16.20	5936	9425
Diamond	9114	3'	8"	6.0	2.11	40.10	40.87	8.92	.48	5.12	63.25	1.48	13.01	6510	11908
Blk. D'nd	9105	5'	4"	4.8	2.70	41.36	51.65	4.28	.34	5.24	67.94	1.20	11.63	6370	11477
Diamond	9107	4'	5"	4.2	1.95	37.82	45.41	14.82	.58	5.05	65.77	1.31	12.27	6804	11897
Diamond	9104	4'	8"	3.2	1.79	43.20	50.34	4.66	.49	5.45	68.67	1.78	11.35	6978	12637
anklin...	9184	4'	4"	2.0	3.30	40.40	52.76	3.54	.49	5.10	68.15	1.10	12.54	6849	12828
Bed —, Kummer mine	9103	3'	6"	9.7	2.32	35.96	50.16	11.36	.56	4.73	58.04	1.34	12.94	5950	10710
Bed —, Kummer mine	9115	4'	2"	9.7	2.93	33.18	38.57	24.82	.65	4.77	60.06	.98	10.69	5778	10400
Harries bed, Rose Marshall mine	9113	4'	4"	12.3	2.11	34.06	33.66	10.17	.49	4.96	65.11	.90	10.50	5565	10541
No. 1 bed, Occidental mine	10512	5'	7"	3.3	4.09	35.74	43.86	16.54	.63	4.77	60.06	.98	10.69	6094	10909
Old No. 2, Occidental mine	9470	3'	4"	2.4	2.80	35.25	48.70	13.25	.74	4.96	65.68	1.35	11.64	6678	12019
Occidental mine	9480	3'	4"	2.6	2.92	33.56	48.32	14.88	.72	4.59	54.68	1.35	11.64	4557	9023
Old No. 3, Occidental mine	9481	5'	8"	1.7	2.31	35.79	49.60	12.30	.50	4.88	61.20	1.49	9.98	5450	9804
New mine bed, Occidental mine	9476	5'	8"	2.1	3.02	35.13	49.95	11.90	.21	4.88	61.20	1.49	9.98	5450	9804
New mine bed, Occidental mine	9477	6'	1"	1.8	2.40	33.70	46.80	17.55	.59	4.88	61.20	1.49	9.98	5450	9804
New mine bed, Occidental mine	9470	1'	5"	1.6	2.48	37.82	42.02	6.74	.52	4.88	61.20	1.49	9.98	5450	9804
No. 6 bed, Occidental mine	9481	3'	2"	2.8	2.83	32.72	42.02	22.43	.52	4.88	61.20	1.49	9.98	5450	9804
bed, Independent mine	9474	3'	5"	3.4	2.70	30.80	42.19	24.31	.52	4.88	61.20	1.49	9.98	5450	9804
No. 1 bed, Sunset mine	9265	4'	7"	6.2	5.06	33.11	46.62	13.81	.95	4.88	61.20	1.49	9.98	5450	9804
No. 3 bed, Sunset mine	9284	3'	1"	2.2	2.84	33.54	40.56	22.26	.79	4.88	61.20	1.49	9.98	5450	9804
No. 3 bed, Sunset mine	9265	2'	4"	2.8	2.84	35.30	46.33	15.44	.48	4.88	61.20	1.49	9.98	5450	9804
No. 7 bed, Sunset mine	9276	5'	9"	2.6	2.40	27.15	30.88	39.57	.42	4.88	61.20	1.49	9.98	5450	9804
bed, Independent mine	9286	5'	4"	3.4	2.83	32.42	37.74	27.81	.49	4.88	61.20	1.49	9.98	5450	9804
Upper part lower bench, Naval mine	9285	1'	0"	4.0	2.27	31.25	39.06	27.42	.68	4.88	61.20	1.49	9.98	5450	9804
Top bench, Naval mine	9287	2'	5"	2.8	2.76	33.25	43.35	21.64	.71	4.88	61.20	1.49	9.98	5450	9804

(1) Composite of 9416, 9417, 9418, 9419, 9420, 9421, 9422, 9423, 9424, 9425, 9426, 9427.

RESULTS OF COAL ANALYSES.—Continued.
KING COUNTY—Continued.

CHEMICAL ANALYSIS													
Labo- ratory No.	Thick- ness of part sam- pled	Air drying loss of sample as re- ceived	Proximate			Ultimate					Value		
			Mois- ture	Vol'tile matter	Fixed Carbon	Ash	Sul- phur	Hydro- gen	Car- bon	Nitro- gen	Oxy- gen	Calo- ries	B. T. U.
9284	2' 4"	2.7	2.16	36.68	48.71	12.50	.58	5.19	68.68	1.70	11.42	6961	12560
9294	4' 10"	4.2	1.80	32.05	45.78	19.76	.48	4.81	63.00	1.18	10.77	6343	11417
9112	6'	7.6	1.16	32.63	45.62	30.50	.38	4.70	62.02	1.21	10.96	6244	11232
9110	3' 11"	3.5	1.40	34.21	42.46	31.54	.62	4.92	61.50	1.29	8.89	6179	11122
9259	2'	3.3	2.56	39.24	49.94	9.36	.65	5.46	71.38	1.78	11.49	7209	12976
9276	3'	5.5	7.01	33.13	46.06	13.78	.49	4.86	60.07	1.46	19.35	5784	10411
9435	3' 11"	2.3	1.96	33.17	53.46	11.39	.46	...	...	...	...	...	...
9436	(3)	1.5	2.35	34.15	54.15	9.35	.40	...	...	...	...	...	...
9439	2' 8"	3.1	2.09	31.31	57.74	8.36	.37	5.01	74.80	1.18	10.28	7367	13260
9278	2' 9"	3.1	1.37	32.00	58.56	12.08	.75	5.09	72.31	1.06	8.14	7800	13140
9288	2'	2.3	1.96	25.62	58.21	34.21	.50	...	...	...	...	5100	9180
9111	4' 3"	12.6	1.70	6.50	58.80	33.00	.45	...	...	...	...	5036	9170
9546	3'	4.0	1.50	7.50	58.00	59.00	3.45	...	...	...	...	2825	5085
10081	4'	7.3	1.00	29.32	59.55	11.58	.51	4.76	75.13	1.96	6.10	7456	12421
10082	3' 4"	4.1	2.07	23.66	61.83	12.94	.92	...	...	...	...	6204	11167
10083	4' 10"	3.7	1.19	23.30	45.23	25.23	1.54	4.68	60.08	1.32	6.99	6102	10884
(3) Lump sample.													
KITITIAH COUNTY													
9472	3' 6"	3.9	4.27	35.90	47.40	12.58	.47	5.36	66.92	1.46	14.06	6033	11280
9409	4' 6"	2.8	5.85	35.08	46.85	13.36	.44	5.35	65.13	1.46	15.36	6334	11701
9409	4' 4"	3.	5.69	35.98	46.33	12.68	.43	5.35	64.62	1.68	15.48	6498	11606
9429	4' 1"	1.1	2.13	36.92	49.74	11.21	.37	...	...	...	...	...	...
9437	4' 7"	1.4	2.29	35.36	49.00	12.45	.38	...	...	...	...	...	...
9424	5' 8"	1.4	2.25	35.63	47.83	13.60	.39	...	...	...	...	...	...
9425	5'	1.5	3.11	36.46	50.26	10.71	.40	...	...	...	...	...	...
9437	4' 6"	1.9	2.08	37.61	48.88	11.58	.38	...	...	...	...	...	...

RESULTS OF COAL ANALYSES.—Continued.
PIERCE COUNTY.

COAL BED SAMPLED	Labo- ratory No.	Thick- ness of part sam- pled	Air drying loss of sample as re- ceived	CHEMICAL ANALYSIS							Value			
				Proximate			Ultimate				Calo- ries	B. T. U.		
				Mole- ture	Vol'tile matter	Fixed Carbon	Ash	Sul- phur	Hydro- gen	Car- bon			Nitro- gen	Oxy- gen
Black Carbon bed, Black Carbon mine.	9892	3' 9"	2.7	2.45	33.79	40.22	23.00	.55	4.58	58.92	1.75	10.00	5982	10732
Washed coal, Pittsburgh mine	9893	4' 4"	4.7	3.24	32.51	42.53	21.45	.42	4.73	60.01	1.78	11.69	5989	10730
"	9894	4' 11"	2.2	3.55	33.45	43.16	20.84	.56	4.72	60.52	1.88	11.48	6107	11101
"	9895	3' 9"	3.5	3.25	33.94	43.64	19.14	.42	4.78	60.98	1.70	12.08	6125	11025
"	9896	3' 9"	2.4	1.32	36.93	53.42	8.59	.78	5.49	75.71	2.06	7.71	7725	13906
"	9897	1' 6"	1.8	1.84	37.51	45.30	14.35	.39	5.25	69.00	1.78	9.23	6908	12805
"	9898	1' 6"	1.4	1.86	37.51	47.47	13.34	.42	5.22	70.75	1.93	9.23	7051	12701
"	9899	1' 6"	6.1	1.72	36.59	49.00	12.09	.60	5.34	71.89	2.00	8.08	7882	18105
Queen bed, Gale Creek mine.	9910	3' 4"	1.4	1.41	34.26	54.08	9.70	1.02	5.86	74.93	2.08	6.06	7579	13042
No. 1 bed, Gale Creek mine.	9908	3' 4"	3.4	2.16	37.63	51.82	8.54	.83	5.51	73.75	1.93	9.30	7490	13492
No. 2 bed, Gale Creek mine.	9909	3' 4"	2.4	1.54	35.89	53.44	6.13	.93	5.49	76.81	2.00	8.59	7825	14085
Brifer Hill bed, Brifer Hill mine.	9907	4' 0"	2.3	2.47	30.48	57.98	29.17	1.18	4.14	53.65	1.78	10.09	5433	9761
No. 2 bed, Wilkeson mine.	9905	4' 0"	2.8	.92	27.89	58.26	12.95	.46	4.91	74.63	2.25	4.79	7413	13352
No. 2 bed, upper part, Wilkeson mine.	9904	1' 5"	2.3	.78	18.92	58.24	24.03	.44	4.22	72.55	2.00	4.22	6274	11903
No. 2 bed, lower part, Wilkeson mine.	9903	2' 0"	2.8	.78	16.68	65.03	16.51	.50	4.22	72.55	2.00	4.22	7040	12072
No. 3 bed, upper part, Wilkeson mine.	9902	3' 0"	1.0	.93	28.18	62.37	8.67	.43	5.13	78.19	2.09	5.50	7842	14216
No. 3 bed, lower part, Wilkeson mine.	9901	4' 4"	1.2	1.15	24.98	55.96	18.05	.49	5.13	78.19	2.09	5.50	6892	12406
No. 3 bed, Wilkeson mine.	9900	4' 7"	4.3	1.00	21.86	61.98	15.62	.47	4.22	72.98	2.00	4.76	7140	12852
No. 7 bed, Wilkeson mine.	9899	3' 8"	4.9	1.00	21.86	64.29	10.26	.43	4.78	77.96	2.28	4.39	7091	13943
Re-washed coal, Wilkeson mine.	9898	3' 8"	5.3	1.16	24.68	59.90	14.36	.49	4.69	78.32	2.10	5.04	7247	14045
Re-washed coal, South Willis mine	9907	4' 4"	5.0	2.18	29.83	44.25	23.89	.45	4.81	60.99	1.58	8.54	6073	10301
Windsor bed, South Willis mine.	9900	4' 4"	1.4	1.78	30.60	46.14	21.43	.42	4.73	68.45	1.89	8.34	6882	11808
Snell bed, Snell mine.	9906	2' 4"	5.4	1.39	27.23	52.93	18.16	.52	5.22	68.47	2.04	8.05	6791	12224
No. 1 bed, N. Carbonado mine.	9572	6' 5"	1.8	1.61	32.80	55.44	15.15	.46	4.81	70.16	2.06	6.74	7010	12988
No. 2 bed, coking, N. Carbonado mine.	9557	8' 5"	2.8	1.07	27.83	53.29	15.81	.40	4.89	72.67	1.95	6.25	7289	13120
No. 3 bed, coking, N. Carbonado mine.	9556	1' 5"	3.5	.70	31.03	54.29	18.98	.37	4.89	72.67	1.95	6.25	7289	13120
No. 2 bed, coking, lower bn., N. Carb'n do	9555	6' 2"	3.0	.93	27.43	50.85	20.89	.40	4.82	65.82	1.90	6.08	6597	11875
No. 5 bed, N. Carbonado mine.	9554	4' 4"	1.9	1.73	30.51	51.26	16.70	.57	4.82	66.79	2.14	8.08	6630	11984
Wingate bed, Carbonado No. 1 mine.	9550	4' 5"	1.5	1.30	26.85	53.04	8.24	.50	4.72	75.20	2.13	8.21	7630	15745
No. 3 (?) bed, Burnett mine.	9550	4' 7"	1.3	1.98	35.45	48.91	12.02	.39	5.21	71.67	2.00	8.11	7159	12850

	9553	5' 1"	2.0	2.04	37.00	53.83	0.54	.53	5.73	75.53	2.20	9.47	7381	13556
Wingate bed, Carbonado No. 6 mine.....	9553	(1)	1.8	1.20	37.85	52.76	1.10	.40	5.22	72.70	2.00	8.45	7376	13544
Wingate bed, Carbonado mine.....	9553	.....	1.7	1.51	35.12	52.44	10.93	.70	6.06	71.07	2.13	8.22	7376	13577
Wingate lump, Carbonado mine.....	9556	.....	4.7	1.40	32.34	53.00	12.66	.83	4.93	69.08	2.18	7.45	6806	12926
Wingate washed, Carbonado mine.....	9557	3' 6"	2.6	1.37	29.71	53.04	15.86	.53	4.68	64.07	1.83	8.97	6435	12429
No. 9 bed, Carbonado mine.....	9556	3' 2"	2.7	1.80	29.24	48.91	20.05	.40	4.68	64.07	1.83	8.97	6435	11583
No. 11 bed, Carbonado mine.....	9570	.....	2.5	1.23	33.19	52.81	12.77	.78	4.96	70.93	2.08	8.48	7386	12974
Washed coal, Carbonado mine.....	9561	.....	2.3	1.29	33.19	49.31	18.13	.41	5.00	68.75	2.01	8.43	6612	11902
Douty lump, Carbonado mine.....	9571	.....	4.6	1.26	32.07	52.33	14.31	.44	5.00	68.75	2.01	8.43	7080	12454
Douty washed coal, Carbonado mine.....	9571	.....	4.6	1.52	10.16	69.12	19.20	.72	.....	.....	.....	.....	6705	12069
No. 1 bed, Melmont mine.....	9577	3' 7"	7.8	1.23	12.57	66.90	19.40	.40	.....	.....	.....	.....	6739	12130
No. 2 bed, upper bench, Melmont mine.....	9578	3' 6"	4.4	1.23	12.57	66.90	19.40	.40	.....	.....	.....	.....	6839	12490
No. 3 bed, lower bench, Melmont mine.....	9580	5' 3"	4.5	1.62	12.36	69.37	16.65	.45	.....	.....	.....	.....	7029	12897
No. 3 bed, Melmont mine.....	9578	4'	2.3	.88	21.90	61.98	15.29	.38	.....	.....	.....	.....	7029	12897
No. 3 bed, Melmont mine.....	9579	6' 5"	6.2	.78	24.98	61.07	13.87	.36	4.79	73.75	1.77	5.46	7396	13132
Car sample washed, Melmont mine.....	9575	.....	6.9	.91	21.81	57.23	20.00	.36	4.86	67.16	1.68	6.44	6719	13004
No. 7, Fairfax mine.....	9507	3' 8"	1.3	1.60	23.63	95.37	10.45	.54	4.92	78.20	2.16	8.73	7724	13003
No. 1 bed, Fairfax mine.....	9508	8'	2.2	.63	18.90	46.40	34.01	.69	3.74	55.02	1.56	5.19	5437	9787
Blacksmith bed, Fairfax mine.....	9509	1' 9"	2.0	1.30	21.43	64.23	12.86	.69	4.77	44.63	1.83	5.00	7401	13322
No. 1 bed, Montezuma mine.....	9502	4' 4"	5.0	.72	20.23	65.66	13.40	.73	.....	.....	.....	.....	7394	13309
No. 2 bed, Montezuma mine.....	9503	2' 11"	2.3	.75	18.32	57.47	23.26	.70	.....	.....	.....	.....	6394	11509
No. 3 bed, washed, Montezuma mine.....	9504	.....	5.8	1.00	18.90	60.51	20.07	.51	4.18	65.73	1.88	4.97	6611	11720
No. 3 bed, blacksmith, Montezuma mine.....	9505	2' 9"	3.3	.67	18.75	66.50	12.99	.54	4.64	75.33	2.13	4.37	6788	12218
Nos. 3 and 4, washed, Montezuma mine.....	9513	.....	4.7	.69	20.62	86.96	11.01	.57	.....	.....	.....	.....	7511	13520
No. 4, Montezuma mine.....	9506	2' 7"	2.0	.56	21.47	86.96	11.01	.57	.....	.....	.....	.....	7507	13693
Upper bench, Ashford mine.....	9535	5' 9"	2.4	1.66	22.54	36.82	23.38	.70	3.50	48.10	1.30	7.42	4786	8615
Lower bench, Ashford mine.....	9554	5' 1"	2.6	1.55	25.09	45.96	27.47	.45	4.13	59.71	1.43	6.81	5672	10570

(1) Wingate unwashed coal after screening over 3-inch bar screen.

THURSTON COUNTY.

	9587	3' 6"	9.5	14.30	37.18	36.42	12.10	2.65	5.50	54.01	.80	24.94	5384	9391
King mine coal bed.....	9587	.....	12.4	14.48	36.81	38.89	9.88	.94	5.70	53.96	1.04	23.49	5181	9826
Perth mine coal bed.....	9178	4' 7"	6.3	10.37	34.00	30.88	24.75	1.80	4.63	46.36	.78	21.88	4696	8827
Black Bear coal bed.....	9589	5' 7"	10.0	5.98	39.47	43.65	10.96	.50	.....	.....	.....	.....	5892	10096
Upper bench, Hannaford No. 12 mine.....	9589	4' 4"	16.0	5.98	39.47	43.65	10.96	.50	.....	.....	.....	.....	5892	10096
Lower bench, Hannaford mine.....	9585	6' 3"	17.4	7.40	37.50	45.30	9.80	.44	5.16	60.97	1.23	22.36	5750	10360
Lower bench, Hannaford mine.....	9586	6' 3"	16.7	7.20	37.50	45.70	9.60	.44	5.20	59.50	1.30	23.83	5755	10360
Lower bench, Hannaford mine.....	9584	.....	16.8	6.50	38.00	44.50	11.00	.40	.....	.....	.....	.....	5720	10290

STATE OF WASHINGTON
DEPARTMENT OF STATE

SECOND BIENNIAL REPORT

ELECTION DIVISION

I. M. HOWELL,
Secretary of State

OLYMPIA :
FRANK M. LAMBORN  PUBLIC PRINTER
1917

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LETTER OF TRANSMITTAL.

STATE OF WASHINGTON.
OFFICE OF THE SECRETARY OF STATE.
ELECTION DIVISION.

OLYMPIA, WASH., December 31, 1916.

Honorable Ernest Lister, Governor.

Sir : I have the honor to submit herewith to you, and through you to the Honorable State Legislature, a report of the Election Division of this department for the biennial period ending December 31, 1916.

Respectfully submitted,

I. M. HOWELL,
Secretary of State.

INTRODUCTION.

The multiplicity of urgent requests for detailed information contained in this report made necessary its publication. It was therefore thought wise to effect considerable saving by compiling all this information into one comprehensive pamphlet in the form of a report.

In compliance with section 4828, Rem. & Bal. Code, a canvassing board consisting of the State Auditor, State Treasurer and the Secretary of State met on October 31, 1916, and canvassed the returns of the primary election held on September 12, 1916, with the results as shown elsewhere in this report.

On December 12, 1916, the 39th county filed its certificate of the canvass of the general election, held on November 7, 1916. This department proceeded at once to check, compare and estimate the vote shown on the returns filed by the various County Auditors and on December 22, 1916, filed with His Excellency, the Governor, a copy of said abstract in accordance with section 4937 of Rem. & Bal. Code, as shown elsewhere in this report.

The Initiative, Referendum and Recall provisions became a part of our State Constitution by vote of the people at the general election on November 5, 1912.

The 1913 Legislature provided the means for carrying the initiative law into effect in Chapter 138 of the Session Laws of 1913. Chapter 137 of the 1913 Session Laws provided \$300,000 to defray the expenses of measures presented under any of the provisions of the Initiative, Referendum or Recall. There was turned back to the state treasury \$250,005.24 of the amount appropriated.

INITIATIVE.

Under the provisions of Chapter 138, Laws of 1913, recited in the First Biennial Report of this Division, there were filed eighteen initiative measures out of which numbers 3, 6, 7, 8,

9, 10 and 13 found places on the ballot and numbers 3 and 8 prevailed at the general election held November 3, 1914. These measures were commonly known as "state-wide prohibition" and "abolishing employment offices" and are now effectively in operation.

During the current biennium there has been filed initiative measures numbered 19, 20, 21, 22, 23, 24, 25, 26, 27, 28 and 29, out of which number only 24, common known as the "breweries measure," obtained sufficient signatures to warrant its checking under the provisions of the law.

Ten days were required for checking the petition. It was found to contain 69,784 signatures as a gross total. The deductions were: Uninitialed, 17,774; duplications, 650, leaving 51,360 apparently legal signers. The names and addresses of the uninitialed and duplicate signers were promptly certified to the prosecuting attorney of the county wherein the same were resident.

Initiative measure No. 18, known as the "hotelmen's bill," was initiated to the Legislature at its 1915 session, but as no action was taken by that body the measure automatically was placed upon the ballot.

REFERENDUM.

The referendum was invoked on seven laws enacted by the 1915 Legislature, known as chapters 54, 55, 52, 181, 178, 46 and 49. These measures were numbered serially and respectively 3, 4, 5, 6, 7, 8 and 9. Petitions were filed on June 9, 1915, and were found to contain the requisite number of signatures. They were detached in the presence of the Hon. H. O. Fishback, Insurance Commissioner, on June 10, 1915, and bound into volumes as required by the law.

Checking was commenced on June 14, and finished on July 17, 1915. All petitions were found to have a sufficient number of signatures and properly entitled to places on the ballot.

Prosecuting attorneys were again promptly furnished with lists of uninitialed and duplicated signers resident in their re-

spective counties in accordance with the provisions of section 16, chapter 138, Laws of 1913.

The 1915 Legislature framed one amendment to the Constitution relating to the qualification of voters in districts seeking to create an indebtedness.

All initiative and referendum measures and the proposed amendment to the Constitution were defeated at the polls.

LIST

OF

Congressional, State and County
Officers

OF THE

STATE OF WASHINGTON

1917

CONGRESSIONAL, STATE AND COUNTY OFFICERS

CONGRESSIONAL.

U. S. Senators.....Wesley L. Jones.....North Yakima
Miles PoindexterSpokane
U. S. Representatives.....John F. Miller, 1st Dist.....Seattle
Lindley H. Hadley, 2d Dist..Bellingham
Albert Johnson, 3d Dist.....Hoquiam
William L. LaFollette, 4th Dist..Pullman
C. C. Dill, 5th Dist.....Spokane

STATE OFFICERS.

GovernorErnest ListerOlympia
Secretary to the Governor.....Irvin W. Ziegau.....Olympia
Lieutenant GovernorLouis F. Hart.....Tacoma
Secretary of State.....I. M. Howell.....Olympia
Assistant Secretary of State.....J. Grant Hinkle.....Olympia
AuditorC. W. Clausen.....Olympia
Assistant State Auditor.....F. P. Jameson.....Olympia
Deputy State Auditor.....E. F. Jones.....Olympia
TreasurerW. W. Sherman.....Olympia
Deputy State Treasurer.....J. L. Glazebrook.....Olympia
Attorney GeneralW. V. Tanner.....Olympia
Assistant Attorney General.....R. E. Campbell.....Olympia
Assistant Attorney General.....Hance H. Cleland.....Olympia
Assistant Attorney General.....L. L. Thompson.....Olympia
Assistant Attorney General.....Howard WatermanOlympia
Commissioner of Public Lands.....Clark V. Savidge.....Olympia
Assistant Commissioner of Public Lands.W. W. Hopkins.....Olympia
Insurance CommissionerH. O. Fishback.....Olympia
Deputy Insurance Commissioner.....Stewart E. Smith.....Olympia
Actuary Insurance Department.....F. T. Houghton.....Olympia
Superintendent Public Instruction.....Mrs. Josephine Corliss Preston..Olympia
Asst. Supt. Public Instruction.....Arthur WilsonOlympia
Deputy Supt. Public Instruction.....Mrs. Addie E. Dickinson.....Olympia
Adjutant GeneralMaurice ThompsonSeattle
Assistant Adjutant General.....Frank P. Liggett.....Seattle
Agricultural CommissionerE. F. Benson.....Olympia
Secretary, Agricultural Department.....Frank B. Fuller.....Olympia
Assistant Commissioner, Division of
Dairy and Livestock.....H. T. Graves.....Olympia
Assistant Commissioner, Division of
Foods, Feeds, Fertilizers, Drugs,
and Oils (including inspection of
Bakeries)J. J. Higgins.....Olympia
Chief Deputy Oil Inspector.....S. P. Wilson.....Seattle
Assistant Commissioner, Division of
HorticultureT. O. Morrison.....Olympia
State Fair, Frank Meredith, Secre-
tary, North Yakima.....Department of Agriculture.....Olympia
Veterinary Examining Board.....H. T. Graves.....Olympia
J. T. Seely, Treasurer.....Seattle
W. D. Garratt, Secretary.....Puyallup

State Labor Commissioner.....	C. H. Younger.....	Olympia
State Librarian	J. M. Hitt.....	Olympia
Assistant State Librarian.....	Maud R. Macpherson.....	Olympia
Law Librarian	C. W. Shaffer.....	Olympia
Assistant Law Librarian.....	L. R. Lounsbury.....	Olympia
Superintendent Traveling Library.....	Mrs. Lou G. Diven.....	Olympia
State Fish Commissioner and Chief		
State Game Warden.....	Leslie H. Darwin.....	Seattle
Deputy State Game Warden.....	R. B. Wales.....	Spokane
Coal Mine Inspector.....	James Bagley	Seattle
Public Printer	Frank M. Lamborn.....	Olympia
Bank Examiner	W. E. Hanson.....	Olympia
Hotel Inspector	J. F. Myhan.....	Tacoma
Fire Warden	F. E. Pape.....	Olympia
Highway Commissioner	James Allen	Olympia
State Geologist	Henry Landes	Seattle
State Chemists	Geo. A. Olson.....	Pullman
	Chas. W. Johnson.....	Seattle
State Commissioner of Health.....	Dr. T. D. Tuttle.....	Seattle
State Fiscal Agency.....	The Equitable Trust Company of America	New York
State Superintendent of Weights and		
Measures	I. M. Howell, <i>Ex-officio</i>	Olympia
Deputy Superintendent of Weights		
and Measures	Bert S. Snyder.....	North Yakima
Inspector of Weights and Measures....	W. B. Newcomb.....	Olympia
Commissioner of Statistics.....	I. M. Howell, <i>Ex-officio</i>	Olympia
Deputy Commissioner of Statistics....	Harry F. Giles.....	Olympia
Clerk of Supreme Court.....	C. S. Reinhart.....	Olympia
Superintendent Election Division.....	Charles B. Wood.....	Olympia

EX-OFFICIO BOARDS AND COMMISSIONS.

Board of Finance.....	Governor	Olympia
	State Auditor	Olympia
	State Treasurer	Olympia
Historical Building Commission.....	Governor	Olympia
	Secretary of State.....	Olympia
	State Treasurer	Olympia
Board of State Land Commissioners....	Land Commissioner	Olympia
	Secretary of State.....	Olympia
	State Treasurer	Olympia
Board of Equalization.....	State Auditor	Olympia
	Land Commissioner	Olympia
	Member Public Service Com....	Olympia
Public Archives Commission.....	Governor	Olympia
	Secretary of State.....	Olympia
	State Auditor	Olympia
Board of Geological Survey.....	Governor	Olympia
	Lieutenant Governor	Tacoma
	State Treasurer	Olympia
	President Univ. of Washington..	Seattle
	President Wash. State College..	Pullman
Public Property Commission.....	Secretary of State.....	Olympia
	State Auditor	Olympia
	State Treasurer	Olympia

Oyster Commission	Governor	Olympia
	Land Commissioner	Olympia
	Fish Commissioner	Seattle
Library Commission	Governor	Olympia
	Attorney General	Olympia
	Supreme Court Judges.....	Olympia
Highway Commission	Governor	Olympia
	State Treasurer	Olympia
	One Member Pub. Serv. Com....	Olympia
	State Auditor	Olympia
	Highway Commissioner	Olympia
Board of Fish Commissioners.....	Governor	Olympia
	State Treasurer	Olympia
	State Fish Commissioner.....	Seattle
Washington State Historical Society....	Governor	Olympia
	Secretary of State.....	Olympia
	State Treasurer	Olympia
Secretary.....	W. P. Bonney.....	Tacoma

STATE BOARDS AND COMMISSIONS.

Agricultural Advisory Board.....	Ernest Lister	Olympia
	E. E. Flood.....	Spokane
	Dr. Ira D. Cardiff.....	Pullman
	Dr. Granville Lowther....	North Yakima
Secretary.....	E. F. Benson.....	Olympia
Board of Accountancy.....	Wm. McAdam	Seattle
	Ole S. Larson.....	Seattle
	George Shedden	Tacoma
Secretary.....	Rodney D. White.....	Seattle
	Alfred Lister	Tacoma
Board of Barber Examiners.....	H. C. Pickering.....	Tacoma
Secretary.....	Fred McGonagle	Seattle
	Hugh W. McElroy.....	Spokane
Board of Control.....	W. H. Cochran.....	Olympia
	G. Dowe McQuesten.....	Olympia
	T. E. Skaggs.....	Olympia
Secretary.....	O. A. Torgeson.....	Olympia
Board of Dental Examiners.....	Dr. Chas. Howard Libby..	North Yakima
	Dr. Rodney L. Hearne.....	Seattle
	Dr. J. W. Rawlings.....	Tacoma
	Dr. Pascal W. Yearsley.....	Spokane
Secretary.....	Dr. S. L. Moak.....	Montesano
Board of Education.....	State Supt. Pub. Instruction....	Olympia
	President University of Wash....	Seattle
	President Wash. State College..	Pullman
	G. W. Nash.....	Bellingham
	C. R. Frazier (City Supt.).....	Everett
	H. M. Hart.....	Spokane
	L. L. Sellers.....	Waterville
Secretary.....	Mrs. Addie E. Dickinson.....	Olympia
Board of Embalmers.....	W. B. Buckley.....	Tacoma
	Dave P. Bailey.....	Waitsburg
Ex-officio Secretary.....	Dr. T. D. Tuttle.....	Seattle

Board of Medical Examiners.....	Dr. D. M. Stone.....	Seattle
	Dr. A. J. Nelson.....	Seattle
	Dr. James A. MacLachlan.....	Dayton
	Dr. J. J. Tilton.....	Toppenish
	Dr. Royal A. Gove.....	Tacoma
	Dr. J. E. Hodgson.....	Spokane
	Dr. Elmer D. Olmsted.....	Spokane
	Dr. H. F. Morse.....	Wenatchee
Secretary.....	Dr. C. N. Suttner.....	Walla Walla
Board of Health and Vital Statistics...	Wilson Johnston	Colfax
	Elmer E. Heg.....	Seattle
	Frederick R. Hedges.....	Everett
	Mrs. Marion M. McCreddie....	Sunnyside
	E. F. Benson.....	Olympia
Secretary.....	Dr. T. D. Tuttle.....	Seattle
Board of Optometry.....	I. M. Radabaugh.....	Spokane
	Charles G. Holcomb.....	Seattle
Secretary.....	Maude Coles Whitlock.....	Tacoma
Board of Pharmacy.....	C. Osseward	Seattle
	F. D. Marr.....	Tacoma
	G. C. Norton.....	Tacoma
	V. T. McCroskey.....	Colfax
Secretary.....	D. B. Garrison.....	Connell
Bureau of Inspection and Super- vision of Public Offices.....	C. W. Clausen, <i>Ex-officio</i> Chief..	Olympia
	Al Helander	Olympia
	James F. Leghorn.....	Olympia
	I. A. Pedersen.....	Olympia
Secretary.....	Hattie M. Watson.....	Olympia
State Labor Commissioner.....	C. H. Younger.....	Olympia
Assistant State Labor Commissioner...	Miss Lucia A. Crangle.....	Seattle
Secretary.....	Miss E. K. Dahlberg.....	Olympia
Forest Commission	Clark V. Savidge.....	Olympia
	Ed. English	Mt. Vernon
	Pat McCoy	Seattle
	W. W. Emery.....	Napavine
	Frank B. Cole.....	Tacoma
Secretary.....	F. E. Pape.....	Olympia
Industrial Insurance Commission.....	J. M. Wilson.....	Olympia
	Forrest I. Gill.....	Olympia
Secretary.....	P. Gilbert	Olympia
Library Advisory Board.....	J. B. Kaiser.....	Tacoma
	Mrs. Henry McCleary.....	McCleary
	Mrs. O. K. Williamson.....	Prosser
	Mrs. Sarah McMillan Patton...	Hoquiam
Nurses' Examining Board.....	Anna Phillips (Pres.).....	Tacoma
	Helen K. Lester.....	Spokane
	May S. Loomis.....	Seattle
	Miss C. A. Hancock.....	Spokane
Secretary.....	Ella A. Wilkinson.....	Bellingham

State Board of Park Commissioners.....	Ernest Lister	Olympia
	Clark V. Savidge.....	Olympia
	C. W. Clausen.....	Olympia
	W. W. Sherman.....	Olympia
State Capitol Commission.....	Ernest Lister	Olympia
	C. W. Clausen.....	Olympia
	Mark E. Reed.....	Shelton
	A. H. Chambers.....	Olympia
	Moritz Thomsen	Seattle
	C. R. Jackson.....	Olympia
Secretary.....	Clark V. Savidge.....	Olympia
Assistant Secretary.....	Fred G. Cook.....	Olympia
Bar Examiners	Robert C. Saunders.....	Seattle
	Dix H. Rowland.....	Tacoma
	Chas. T. Lund.....	Spokane
Secretary.....	C. S. Reinhart.....	Olympia
Public Service Commission.....	E. F. Blaine.....	Olympia
	Arthur A. Lewis.....	Olympia
	Frank R. Splaing.....	Olympia
Secretary.....	J. H. Brown.....	Olympia
Chief Grain Inspector.....	B. D. Jarboe.....	Tacoma
Industrial Welfare Commission.....	Mrs. Jackson Silbaugh.....	Seattle
	Mrs. W. H. Udall.....	Tacoma
	M. H. Marvin.....	Tacoma
Secretary.....	Mrs. Frances King Headlee.....	Olympia
Tax Commission	C. R. Jackson.....	Olympia
	J. W. Brislawn.....	Olympia
Secretary.....	Thomas P. Horn.....	Olympia
Uniform Legislation Commission.....	Charles E. Sheppard.....	Seattle
	Alfred Battle	Seattle
	W. V. Tanner.....	Olympia
State Humane Bureau.....	Ernest Lister	Olympia
	W. V. Tanner.....	Olympia
	Josephine Corliss Preston.....	Olympia
	C. E. Muckler.....	Tacoma
	Chas. M. Farrer.....	Seattle
Secretary.....	Harry L. Parr.....	Olympia

STATE INSTITUTIONS.

Board of Regents University of Washington	{	O. A. Fechter (Pres.)....	North Yakima
		John A. Bea.....	Tacoma
		William T. Perkins.....	Seattle
		Chas. E. Gaches.....	Mt. Vernon
		Eldridge Wheeler	Montesano
		Winlock W. Miller.....	Seattle
		Dr. W. A. Shannon.....	Seattle
Board of Regents State College of Washington	{	W. A. Ritz (President).....	Spokane
		E. T. Coman.....	Spokane
		J. C. Cunningham.....	Spokane
		R. C. McCroskey.....	Garfield
		W. M. Pease.....	Seattle

Trustees State Normal School (Cheney)	{ Mary A. Monroe.....Spokane T. V. Tustin.....Spokane Chas. A. McLean.....Spokane N. D. Showalter (President)....Cheney
Trustees State Normal School (Bellingham)	{ Thomas Smith .....Mt. Vernon F. J. Barlow.....Bellingham C. M. Olsen.....Bellingham G. W. Nash (President)....Bellingham
Trustees State Normal School (Ellensburg)	{ Fred P. Wolff.....Ellensburg H. E. Lucas.....North Yakima Sue M. Lombard.....North Yakima Geo. H. Black (President)...Ellensburg
State School for Deaf.....	Thos. P. Clarke (Supt.).....Vancouver
State School for Blind.....	Sadie E. Hall (Supt.).....Vancouver
State Training School.....	George A. Sheafe.....Chehalis
State School for Girls.....	Mary Campbell (Supt.)...Grand Mound
State Soldiers' Home.....	Ed C. Warner (Supt.).....Orting
Washington Veterans' Home.....	W. H. Wiscombe (Supt.)...Pt. Orchard
Western Hospital for Insane.....	Dr. W. N. Keller (Supt.)..Ft. Steilacoom
Eastern Hospital for Insane.....	Dr. A. S. Oliver, Jr. (Supt.)..Medical Lake
Northern Hospital for Insane.....	Dr. J. W. Doughty (Supt.)..Sedro Woolley
State Penitentiary	Henry Drum (Supt.).....Walla Walla
State Institution for Feeble Minded....	S. C. Woodruff (Supt.)....Medical Lake
State Reformatory	H. R. King.....Seattle G. Dowe McQuesten.....Tacoma T. E. Skaggs.....Olympia W. H. Cochran.....Olympia F. F. Swale.....Everett
Superintendent.....	Donald B. Olson.....Monroe

STATE OF WASHINGTON

LEGISLATIVE ROSTER

FIFTEENTH SESSION

1917

CONVENES JANUARY 8

ADJOURNS MARCH 8

SENATE

MEMBERS OF THE SENATE, FIFTEENTH SESSION, 1917.

No. Dist.	NAME	COUNTIES REPRESENTED	P. O. ADDRESS	POLITICS
1	J. W. Faulkner.....	{ Grant..... Douglas..... Ferry..... Okanogan... }	Okanogan	Democrat
2	*O. R. McMillan.....	{ Stevens..... Pend Oreille.. }	Orin	Democrat
3	Harve H. Phipps.....	Spokane.....	1408 Montgomery, Spokane.....	Republican
4	R. A. Hutchinson.....	Spokane.....	S. 1708 Grand, Spokane.....	Republican
5	E. Ben Johnson.....	Spokane.....	Spokane	Republican
6	*Guy B. Groff.....	Spokane.....	Altadena Apartments, Spokane...	Republican
7	*Frank A. Chase.....	Spokane.....	4th & Cedar, Spokane.....	Republican
8	*Oliver Hall.....	Whitman.....	Colfax	Republican
9	W. W. Brand.....	Whitman.....	Rosalia	Democrat
10	Elgin V. Kuykendall.....	{ Garfield..... Columbia.... Asotin..... Franklin..... }	Pomeroy	Republican
11	Oliver T. Cornwell.....	{ Adams..... Walla Walla.. }	571 Boyer, Walla Walla.....	Republican
12	D. H. Cox.....	Walla Walla...	Walla Walla	Republican
13	John H. Ferryman.....	{ Kittitas..... Ochelan..... }	Wenatchee	Democrat
14	Charles E. Myers.....	Lincoln.....	Davenport	Republican
15	D. V. Morthland.....	{ Yakima..... Benton..... Skamania.... Klickitat.... }	801 Pleasant, North Yakima.....	Republican
16	*J. M. Stevenson.....	Clark.....	Stevenson	Republican
17	Edward L. French.....	Cowlitz.....	R. F. D. No. 1, Vancouver.....	Republican
18	Frank G. Barnes.....	{ Pacific..... Wahkiakum. }	Castlerock	Republican
19	*John W. Kleeb.....	Lewis.....	422 Cowlitz, South Bend.....	Republican
20	A. E. Judd.....	Grays Harbor..	Ohehalla	Democrat
21	*E. E. Boner.....	Thurston.....	263 Hopkins St., Aberdeen.....	Republican
22	P. H. Oarlyn.....	{ Mason..... Kitsap..... Island..... Clallam..... }	Olympia	Republican
23	Peter Iverson.....	Jefferson.....	Poulsbo	Republican
24	*A. A. Smith.....	San Juan.....	Port Angeles	Republican
25	Warner M. Karshner.....	Pierce.....	Puyallup	Republican
26	*Ralph Metcalf.....	Pierce.....	918 N. Yakima, Tacoma.....	Republican
27	Walter S. Davis.....	Pierce.....	U. of Puget Sound, Tacoma.....	Republican
28	Wilburn Fairchild.....	Pierce.....	318 S. 82nd, Tacoma.....	Republican
29	*Jesse S. Jones.....	Pierce.....	6004 S. Junett, Tacoma.....	Republican
30	*Howard D. Taylor.....	King.....	Eagle Gorge	Republican
31	*Ralph D. Nichols.....	King.....	4816 37th S., Seattle.....	Republican
32	*Dan Landon.....	King.....	4116 Fremont, Seattle.....	Republican
33	*William Wray.....	King.....	833 34th S., Seattle.....	Republican
34	*James A. Ghent.....	King.....	Assembly Hotel, Seattle.....	Republican
35	*Lincoln Davis.....	King.....	Arlington Hotel, Seattle.....	Republican
36	*G. E. Steiner.....	King.....	1102 West Howe, Seattle.....	Republican
37	*E. B. Palmer.....	King.....	521 13th N., Seattle.....	Republican
38	Joseph H. Smith.....	Snohomish.....	Everett	Republican
39	*James Burton.....	Snohomish.....	410 Avenue B, Snohomish.....	Republican
40	*W. V. Walls.....	Skagit.....	Anacortes	Republican
41	Ed Brown.....	Whatcom.....	Ouster	Republican
42	*E. J. Cleary.....	Whatcom.....	917 14th St., S. Bellingham.....	Republican

* Holdover.

HOUSE

MEMBERS OF THE HOUSE OF REPRESENTATIVES, FIFTEENTH SESSION, 1917.

No. Dist.	NAME	COUNTIES REPRESENTED	P. O. ADDRESS	POLITICS
1	Z. E. Hayden.....	Stevens.....	Kettlefalls	Republican
1	John Selmer	Stevens.....	Northport	Democrat
2	Ira Honefenger.....	Spokane.....	1104 Knox Ave., Spokane.....	Republican
2	L. L. Westfall.....	Spokane.....	1303 Nora Ave., Spokane.....	Republican
3	Albert A. Kelly.....	Spokane.....	E. 4100 Sprague, Spokane.....	Republican
3	David Porter Reid.....	Spokane.....	E. 1415 36th, Spokane.....	Republican
4	Olaf L. Olsen.....	Spokane.....	Deer Park	Republican
4	A. R. Stratton.....	Spokane.....	R. F. D. No. 7, Spokane.....	Republican
5	Maurice Smith	Spokane.....	W. 708 20th, Spokane.....	Republican
5	L. Frank Boyd.....	Spokane.....	46 Review Bldg., Spokane.....	Republican
6	Fred A. Adams.....	Spokane.....	S. 1108 Walnut, Spokane.....	Republican
6	John Anderson	Spokane.....	Apt. 12, San Marco, Spokane.....	Republican
7	O. E. Hoover.....	Whitman.....	LaCrosse	Republican
7	Roy Jones	Whitman.....	Penanawa	Republican
8	George A. Weldon.....	Whitman.....	Palouse	Republican
8	C. W. McCall.....	Whitman.....	Garfield	Democrat
9	Elmer E. Halsey.....	Asotin.....	Clarkston	Republican
10	J. T. Ledgerwood.....	Garfield.....	Pomeroy	Democrat
11	Geo. Spalinger	Columbia.....	Dayton	Democrat
12	A. L. Ray.....	Walla Walla....	Walla Walla	Democrat
13	John W. Summers.....	Walla Walla....	Walla Walla	Republican
13	R. E. Butler.....	Walla Walla....	Waitsburg	Republican
14	Logan L. Long.....	Franklin.....	Connell	Republican
15	M. W. Anthony.....	Adams.....	Ritzville	Republican
16	E. L. Farnsworth.....	Lincoln.....	Wilbur	Democrat
16	J. J. Cameron.....	Lincoln.....	Harrington	Democrat
17	E. F. Banker.....	Okanogan.....	Winthrop	Democrat
18	James A. Cross.....	Douglas.....	Mansfield	Democrat
19	J. O. Hubbell.....	Kittitas.....	Ellensburg	Republican
19	Delbert O. Kearby.....	Kittitas.....	Cle Elum	Republican
20	William P. Sawyer.....	Yakima.....	R. F. D., Wapato.....	Republican
20	Ina Phillips Williams.....	Yakima.....	North Yakima	Republican
21	John O. Crawford.....	Klickitat.....	Grand Dalles	Republican
22	Elmer E. Shields.....	Skamania.....	Stevenson	Republican
23	George McCoy	Clarke.....	Vancouver	Republican
23	O. W. Ryan.....	Clarke.....	Vancouver	Republican
24	Luther M. Sims.....	Cowlitz.....	Kalama	Republican
25	Joseph Girard	Wahkiakum....	Oathlamet	Republican
26	Fred A. Hart.....	Pacific.....	Raymond	Republican
27	J. S. Siler.....	Lewis.....	Vance	Republican
27	H. H. Swofford.....	Lewis.....	Ohehalls	Republican
27	J. E. Lease.....	Lewis.....	Centralia	Republican
28	Lewis J. Morrison.....	Thurston.....	Olympia	Republican
28	O. O. Aspinwall.....	Thurston.....	Olympia	Republican
29	A. E. Graham.....	Grays Harbor..	Aberdeen	Republican
29	Geo. W. Gauntlett.....	Grays Harbor..	Montesano	Republican
30	O. W. Hodgdon.....	Grays Harbor..	Hoquiam	Democrat
31	Mark E. Reed.....	Mason.....	Shelton	Republican
32	J. Howard Shattuck.....	Kitsap.....	Port Orchard	Republican
33	William Bishop	Jefferson.....	Ohlmacum	Republican
33	H. B. Gardner.....	Jefferson.....	Gardiner	Republican
34	A. J. Cosser.....	Olallam.....	Port Angeles	Democrat
35	Elmer E. Healey.....	Pierce.....	Puyallup	Republican
35	Abe Morris	Pierce.....	Wilkeson	Republican
36	Guy E. Kelly.....	Pierce.....	924 N. L. St., Tacoma.....	Republican
36	Torger Peterson	Pierce.....	R. F. D., Eatonville.....	Republican
37	James H. Davis.....	Pierce.....	812 S. Ainsworth, Tacoma.....	Republican
37	Wm. O. Elliott.....	Pierce.....	1115 S. 4th, Tacoma.....	Republican

MEMBERS OF THE HOUSE OF REPRESENTATIVES—Concluded.

No. Dist.	NAME	COUNTIES REPRESENTED	P. O. ADDRESS	POLITICS
38	Hiram E. Washburn.....	Pierce.....	819 E. 35th, Tacoma.....	Republican
38	Geo. W. Thompson.....	Pierce.....	1102 E. 81st, Tacoma.....	Republican
39	Dr. Winfield P. Goff.....	Pierce.....	1410 S. Madison, Tacoma.....	Republican
39	Claude A. Young.....	Pierce.....	4110 S. Yakima St., Tacoma.....	Republican
40	Fred J. Mess.....	King.....	Orillia	Republican
40	Walter J. Lunn.....	King.....	Anburn	Republican
40	Fred O. Nelson.....	King.....	Orillia	Democrat
41	Paul W. Houser.....	King.....	Renton	Republican
41	A. E. Fuller.....	King.....	4202 Alki Ave., Seattle.....	Republican
42	W. T. Christensen.....	King.....	2450 W. 63rd St., Seattle.....	Republican
42	Frank E. Boyle.....	King.....	4329 7th NE., Seattle.....	Republican
43	Victor Zednick.....	King.....	302 19th S., Seattle.....	Republican
43	Ralph R. Knapp.....	King.....	925 24th S., Seattle.....	Republican
44	Frank H. Manogue.....	King.....	Westminster Apt., Seattle.....	Republican
44	Robert E. Dwyer.....	King.....	710 Boren Ave., Seattle.....	Republican
45	Robert Grass.....	King.....	1220 Boylston Ave., Seattle.....	Republican
45	Frank H. Renick.....	King.....	1424 Belmont Ave., Seattle.....	Republican
46	Fred W. Hastings.....	King.....	3 Prospect St., Seattle.....	Republican
46	Stephen A. Hull.....	King.....	2125 7th Ave., W. Seattle.....	Republican
47	John R. Wilson.....	King.....	1133 17th N., Seattle.....	Republican
47	E. H. Gule.....	King.....	745 Bellevue N., Seattle.....	Republican
48	Thomas N. Swale.....	Snohomish.....	Everett	Republican
48	S. Frank Spencer.....	Snohomish.....	Everett	Republican
49	M. G. Thomle.....	Snohomish.....	Stanwood	Republican
49	Charles W. Gorham.....	Snohomish.....	Snohomish	Republican
50	W. E. Terry.....	Island.....	Coupeville	Republican
51	J. O. Rudene.....	Skagit.....	LaOonner	Republican
51	J. M. Shields.....	Skagit.....	Mt. Vernon	Republican
51	Fred B. Fulton.....	Skagit.....	Anacortes	Republican
52	E. H. Nash.....	San Juan.....	Friday Harbor	Republican
53	Tom Brown	Whatcom.....	Sumas	Republican
53	O. H. Hoff.....	Whatcom.....	Lawrence	Republican
54	Charles I. Roth.....	Whatcom.....	2401 Elm St., Bellingham.....	Republican
54	Fred D. Yale.....	Whatcom.....	930 Indian St., Bellingham.....	Republican
55	A. L. Bradley.....	Ferry.....	Danville	Republican
56	S. O. Pool.....	Chelan.....	Wenatchee	Democrat
58	Gordon O. Moores.....	Benton.....	Richland	Republican
59	John Urquhart	Grant.....	Krupp	Democrat
60	H. H. Murray.....	Pend Oreille.....	Newport	Republican

NON-PARTISAN JUDICIARY.

SUPREME COURT JUDGES.

Chief Justice	Overton G. Ellis.....	Tacoma
	Mark A. Fullerton.....	Colfax
	Stephen J. Chadwick.....	Olympia
	O. R. Holcomb.....	Ritzville
	John F. Main.....	Seattle
	Wallace Mount	Spokane
	Emmett N. Parker.....	Tacoma
	George E. Morris.....	Seattle
	J. Stanley Webster.....	Spokane

SUPERIOR COURT JUDGES.

Adams County	John Truax	Ritzville
Asotin County	Chester F. Miller.....	Dayton
Benton County	John Truax	Ritzville
Chelan County	Wm. A. Grimshaw.....	Wenatchee
Clallam County	John M. Ralston.....	Pt. Angeles
Clarke County	R. H. Back.....	Vancouver
Columbia County	Chester F. Miller.....	Dayton
Cowlitz County	W. T. Darch.....	Kalama
Douglas County	Sam B. Hill.....	Waterville
Ferry County	C. H. Neal.....	Oroville
Franklin County	John Truax	Ritzville
Garfield County	Chester F. Miller.....	Dayton
Grant County	Sam B. Hill.....	Waterville
Grays Harbor County.....	Ben Sheeks	Montesano
	Geo. D. Abel.....	Montesano
Island County	John M. Ralston.....	Pt. Angeles
Jefferson County	John M. Ralston.....	Pt. Angeles
King County	A. W. Frater.....	Seattle
	J. T. Ronald.....	Seattle
	Robert B. Albertson.....	Seattle
	King Dykeman	Seattle
	Mitchell Gilliam	Seattle
	Boyd J. Tallman.....	Seattle
	Kenneth Mackintosh	Seattle
	John S. Jurey.....	Seattle
	Everett Smith	Seattle
Kitsap County	Walter M. French.....	Port Orchard
Kittitas County	John B. Davidson.....	Ellensburg
Klickitat County	W. T. Darch.....	Kalama
Lewis County	W. A. Reynolds.....	Chehalis
Lincoln County	Joseph Sessions	Davenport
Mason County	John R. Mitchell.....	Olympia
	D. F. Wright.....	Shelton
Okanogan County	C. H. Neal.....	Oroville
Pacific County	H. W. B. Hewen.....	South Bend
Pend Oreille County.....	Daniel Henry Carey.....	Colville
Pierce County	Ernest M. Card.....	Tacoma
	W. O. Chapman.....	Tacoma
	M. L. Clifford.....	Tacoma
	C. M. Easterday.....	Tacoma
San Juan County.....	Augustus Brawley.....	Mt. Vernon
Skagit County	Augustus Brawley.....	Mt. Vernon
Skamania County	W. T. Darch.....	Kalama

Snohomish County	Ralph C. Bell.....	Everett
	Guy C. Alston.....	Everett
Spokane County	Wm. A. Huneke.....	Spokane
	Bruce Blake	Spokane
	David W. Hurn.....	Spokane
	Hugo E. Oswald.....	Spokane
	R. M. Webster.....	Spokane
Stevens County	Daniel Henry Carey.....	Colville
Thurston County	John R. Mitchell.....	Olympia
	D. F. Wright.....	Shelton
Wahkiakum County	H. W. B. Hewen.....	South Bend
Walla Walla County.....	Edward C. Mills.....	Walla Walla
Whatcom County	Ed. E. Hardin.....	Bellingham
	Wm. H. Pemberton.....	Bellingham
Wiltman County	R. L. McCroakey.....	Colfax
Yakima County	George B. Holden.....	North Yakima
	Harcourt M. Taylor.....	North Yakima

COUNTY OFFICERS OF WASHINGTON FOR THE TERM COMMENCING JANUARY 8, 1917.

Counties	County Seat	Sheriff	Clerk	Auditor	Treasurer
1 Adams	Ritzville	Geo. N. McCollom	J. C. Hauschild	Laura Schragg	H. E. E. Kalkwarf
2 Asotin	Asotin	F. M. Halsey	J. Warren Stephens	Lillie Ausman	G. A. Fraser
3 Benton	Prosser	C. E. Duffy	M. C. Delle	J. C. Syford	H. S. Huntington
4 Chelan	Wenatchee	Bert McManus	Martin T. Spencer	Terry L. Ross	George R. Fisher
5 Clallam	Port Angeles	Harry C. Bishop	Sam C. Rickson	J. W. Warren	Herbert H. Wood
6 Clarke	Vancouver	E. S. Biesecker	Fannie S. Crocker	May R. Haack	L. G. Conant
7 Columbia	Dayton	W. T. Wooten	E. D. Cleveland	J. T. Clancy	M. Riggs
8 Cowlitz	Kalama	Clark Studebaker	Walter N. Smith	B. O. Olson	Lawrence Perry
9 Douglas	Waterville	S. E. Jordan	Albert C. Adams	D. F. Kinder	J. F. Irwin
10 Ferry	Republic	Harry Durrell	A. C. MacNulty	W. T. O'Connell	M. M. Stack
11 Franklin	Pasco	Edward Onstott	H. A. Robinson	L. D. Conrad	E. D. Sheffield
12 Garfield	Pomeroy	W. J. Schneekloth	Harry St. George	E. E. Powell	Olive O. Darby
13 Grant	Ephrata	A. C. Banko	James D. Steele	C. T. Sanders	W. J. Hauser
14 Grays Harbor	Montesano	Jeff Bartell	W. C. Birdwell	W. D. Campbell	John B. Orton
15 Island	Coupeville	Fred Armstrong	John C. Richards	Roy H. Gillespie	H. Wanamaker
16 Jefferson	Port Townsend	Martin Herstrom	J. J. Bishop	Mae M. Plummer	Arch C. Tweedie
17 King	Seattle	John Stringer	Percy F. Thomas	Norman M. Wardall	John A. Bennett
18 Kitsap	Port Orchard	D. J. Davis	A. M. Anderson	J. M. Peterson	R. E. Gordon
19 Kittitas	Ellensburg	Howard Garrison	Fred T. Hoffman	W. G. Damerow	Maud Gilmour
20 Klickitat	Goldendale	Ira Henderson	Kate Nye	Roy E. Crooks	John A. Miller
21 Lewis	Chehalis	John F. Berry	Cora Black	Bertha Gage	J. E. Raught
22 Lincoln	Davenport	J. A. Level	C. E. M. Sanderson	J. E. Howard	C. C. Gibson
23 Mason	Shelton	W. A. Tucker	Hattie E. Rucker	Irene W. Richardson	W. T. Mann
24 Okanogan	Okanogan	Clair Ward	Mary E. McClure	J. D. Hubbard	F. W. Plessinger
25 Pacific	South Bend	W. H. Turner	Z. B. Brown	W. E. Lovering	Earle E. Decker
26 Pend Oreille	Newport	Frank H. Deering	R. R. Isaacs	S. M. McGee	Louise S. Lewis
27 Pierce	Tacoma	Robert Longmire	E. F. McKenzie	Thomas N. Morris	William Turner
28 San Juan	Friday Harbor	George B. Mead	R. B. L. Douglas	John E. Whiteley	John H. Boyce
29 Skagit	Mount Vernon	Chas. W. Stevenson	J. H. Smith	Will R. Arges	Will R. Wells
30 Skamania	Stevenson	S. L. Knox	S. M. Eddings	C. H. Nellor	John Wachter
31 Snohomish	Everett	James McCulloch	Charles H. Fickel	Mae Weatherbee	D. Carl Pearson
32 Spokane	Spokane	George L. Reid	Glen B. Creighton	Alfred T. Anderson	John H. Tilsley
33 Stevens	Colville	William Miller	W. H. Butler	Earle T. Gates	Irving D. Sill
34 Thurston	Olympia	J. H. Gifford	I. N. Holmes	Annie Gaston	Fred W. Stocking
35 Wahkiakum	Cathlamet	Robert Irving	May B. Watkins	Blanche Heron	Winifred M. Cooper
36 Walla Walla	Walla Walla	Lee Barnes	E. S. Butman	C. F. Dement	Guy Allen Turner
37 Whatcom	Bellingham	Will D. Wallace	Althea Adams	J. A. Miller	Frank Wilson
38 Whitman	Colfax	H. S. McClure	James A. Williams	A. R. Metz	B. F. Manring
39 Yakima	North Yakima	W. P. Murphy	Frank D. Clemmer	Charles E. Barrett	J. E. Peters

COUNTY OFFICERS OF WASHINGTON—CONTINUED.

Counties	Attorney	Assessor	School Supt.*	Engineer
1 Adams	Otto W. Naef	J. H. Perkins	Elisabeth M. Meyer	O. J. DeSpain
2 Asotin	Homer L. Post	El. R. Downen	C. B. Thornton	P. P. Oehler
3 Benton	C. W. Fristoe	A. H. Wheaton	Mrs. Lora M. Crawford	Guy H. Heberling
4 Chelan	Burt J. Williams	Ernest G. Spencer		Fred M. Berry
5 Clallam	Frank L. Plummer	E. A. Pritchett		A. J. Blackwood
6 Clarke	James O. Blair	J. L. Garrett		B. L. Dorman
7 Columbia	R. M. Sturdevant	Blanche Beckett		Wilson McBride
8 Cowlitz	Delos Spaulding		Frederick Stuckert	Fred C. Cramer
9 Douglas	Warren N. Wilson		J. K. Thornton	Robert F. Foster
10 Ferry	Jas. T. Johnson		Earl D. Hougland	L. H. Eubank
11 Franklin	E. M. Gibbons	A. J. Buchet	E. M. Dorsey	J. W. Ketner
12 Garfield	A. G. Farley	Walter W. Kinsey	Belva L. Ball	M. W. Fitzsimmons
13 Grant	N. W. Washington	Sherman Hoover	R. L. Blackburn	C. W. Duncan
14 Grays Harbor	W. H. Tucker	Ernest E. Gaskill	T. W. Bibb	Geo. D. Robertson
15 Island	James Zylstra	W. P. Elliott	Evelyn Spencer	Thos. C. Clark
16 Jefferson	Tom. W. Holman	John M. Thatcher	Elva S. Edwards	B. O. Bendizen
17 King	Alfred H. Lundin	J. F. Anderson	A. S. Burrows	Samuel J. Humes
18 Kitsap	H. E. Gorman	Lillian A. Kenney	H. W. Elliott	Frank B. Gore
19 Kittitas	Arthur L. McGuire	R. E. Nichols	S. A. Bartlett	H. A. Murray
20 Klickitat	John R. McEwen	Jas. McClure	Mabel H. Hinchaw	Geo. W. Borden
21 Lewis	W. H. Cameron	Geo. S. Brown	A. C. Canterbury	J. D. Neville
22 Lincoln	J. D. McCallum	M. B. Schumacher	J. R. Ward	Guy G. Harvey
23 Mason	Alden C. Bayley	C. H. Knober	Anna Kimmel Melvid	Arno V. Meyer
24 Okanogan	Charles A. Johnson	E. A. Seaborg	Georgiana Donald	Horace H. Smith
25 Pacific	John I. O'Phelan	F. E. Davenport	Edith Boper	Chas. S. B. Henry
26 Pend Oreille	Chas. H. Leavy	Jas. J. Cameron	Minnie Johnson	H. A. Sewell
27 Pierce	Fred G. Remann	B. O. Cahall	H. R. Cox	David H. White
28 San Juan	F. A. Belts	J. Z. Nelson	Carrie M. Busby	E. Ed Allen
29 Skagit	A. R. Hilen	Wm. P. Christensen	Mabel Graham	W. E. Costello
30 Shamania	R. M. Wright	Wm. Whitfield	W. G. Detwiller	H. Bueche
31 Snohomish	Lloyd L. Black	Ascell Campbell	W. F. Martin	W. C. Bickford
32 Spokane	John B. White	Wm. Gillings	Jeanette S. Donaldson	Allen R. Scott
33 Stevens	L. B.	H. N. Sticklin	O. C. Goss	C. A. Heberling
34 Thurston	Thos. I	N. P. Overn	Maud K. Butler	Frank A. Weir
35 Wahkiakum	Geo. I	Dr. H. S. Buffum	G. Homer Dunning	J. E. Thorndike
36 Walla Walla	M. A. Brown	Alex Van Wyck	Ethel Everett	Grova C. Cookerly
37 Whatcom	W. P. Clegg	M. C. True	E. F. Shinkle	Chas. Lindberry
38 Whitman	F. R. Clegg	W. D. McNair	Anna R. Nichols	John M. McCaw
39 Yakima	O. R. Schumann			O. E. Brashers

* Term begins September 1, 1917.

COUNTY OFFICERS OF WASHINGTON—CONTINUED.

Counties	Coroner	COUNTY COMMISSIONERS		
		District 1	District 2	District 3
1 Adams	Jacob Schoemaker	C. B. Moody	A. M. Gillis*
2 Asotin	C. Shumaker	John K. McIntosh	O. E. Bailey*
3 Benton	F. L. Bash	E. C. Houston	R. E. Pratt
4 Chelan	E. F. Cadman	Matt Hickey*	Geo. W. Milham
5 Clallam	James Dick	Garfield Davis	James F. Clark*
6 Clarke	M. E. Carson	Abe Miller	John P. Kiggins*
7 Columbia	John Blize	R. H. Prater	E. L. Lindley*
8 Cowlitz	Fred M. Lane	Albert Maurer	P. M. Laughlin*
9 Douglas	H. L. Douglass	M. C. Johnson	J. H. Sanders*
10 Ferry	John H. Grunwell	J. R. Sharp	Geo. J. Taylor
11 Franklin	D. C. W. Neff	Geo. H. Dilling	F. O. Young*
12 Garfield	C. H. Rommel	Ed Malone	E. L. Sanford*
13 Grant	Thos. H. Tiversing	J. C. White	D. C. Thiemens*
14 Grays Harbor	J. B. Kirkaldie	Jerry A. McGillicuddy, Jr.	E. S. Hubble*
15 Island	John M. LeSourd	Lenard Lang	Nils Anderson*
16 Jefferson	Samuel Curry	Percy Bowman*
17 King	L. C. Smith	Krist Knudsen*
18 Kitsap	E. T. Harris	O. C. Palmatier*
19 Kittitas	James Lane	H. G. McNeil*
20 Klickitat	A. B. Youngquist*	Cecil R. West
21 Lewis	Ed. S. Orr	J. T. Blvin*
22 Lincoln	J. E. Furgeson	F. A. Hudkins*
23 Mason	Henry Latham	Chas. H. Wivell*
24 Okanogan	William Anderson	J. H. Green*
25 Pacific	H. E. Christanson	J. T. Stratton*
26 Pend Oreille	R. Greenhalgh*	R. B. Hall
27 Pierce	T. H. Bellingham	J. W. Slayden*
28 San Juan	Geo. W. Woolard	T. G. Blake*
29 Skagit	S. M. Butler	Henry Thompson*
30 Shastania	P. F. Inman	J. W. Shipley*
31 Snohomish	John L. Boyle	J. C. Falconer*
32 Spokane	J. S. Bishop	W. H. McVay*
33 Stevens	Patrick H. Graham	M. C. Stolp*
34 Thurston	S. Y. Bennett	T. Ives Dodge*
35 Wahkiakum	Timothe Richards	Wm. Anderson*
36 Walla Walla	D. E. Eaton	Jim L. Reavis*
37 Whatcom	Henry Shagron	Henry Slater*
38 Whitman	J. B. Sanborn	B. T. Manchester*
39 Yakima	W. L. Dimmick	A. C. Turner

Chapter 42, Session Laws 1915, abolished the office of county wreckmaster
* held over.

ABSTRACT OF VOTES

POLLED IN THE

STATE OF WASHINGTON

AT THE

PRIMARY ELECTION

HELD

SEPTEMBER 12, 1916

FOR

**U. S. Senator, Representatives in Congress, State Officers,
Supreme Court Judges, Joint Superior Court
Judges, and State Senators Whose Dis-
tricts Comprise More Than
One County**

OFFICIAL RETURNS FOR PRIMARY ELECTION

SEPT. 12, 1916

The following is a summary of the official returns of the State on the national, state, district and non-partisan judiciary officers voted for at the primary election held the second Tuesday in September, being the twelfth day of September, nineteen-sixteen, the summary including only the regularly filed candidates and those nominated by the scattering vote:

United States Senators.

<i>Name</i>	<i>First Choice</i>	<i>Second Choice</i>	<i>Total</i>
William E. Humphrey (Republican).....	69,715	25,979	95,694
Miles Poindexter (Republican).....	77,962	28,816	106,778
Enoch A. Bryan (Republican).....	24,868	58,901	83,769
Wm. Alvin Spalding (Republican).....	8,262	19,426	22,688
Schuyler Duryee (Republican).....	3,540	18,119	21,659
Mrs. John B. Allen (Republican).....	6,877	31,544	38,421
Robert Bridges (Democrat).....			9,628
George Turner (Democrat).....			20,002
Walter J. Thompson (Progressive).....			296

Representatives in Congress.

FIRST CONGRESSIONAL DISTRICT.

<i>Name</i>	<i>First Choice</i>	<i>Second Choice</i>	<i>Total</i>
W. M. Whitney (Republican).....	8,337	4,660	12,997
Frank E. Hammond (Republican).....	1,984	3,405	5,389
H. E. Foster (Republican).....	1,065	2,094	3,159
J. Y. C. Kellogg (Republican).....	2,108	3,933	6,041
James Wesley Bryan (Republican).....	4,963	4,095	9,058
John E. Ballaine (Republican).....	7,638	6,900	14,538
John F. Miller (Republican).....	8,735	7,601	16,336
Lincoln Davis (Republican).....	1,774	3,060	4,834
Frank Pierce (Republican).....	889	2,595	3,484
Daniel Landon (Republican).....	8,191	6,990	15,181
George F. Cotterill (Democrat).....			5,719
George F. Cotterill (Progressive).....			17

SECOND CONGRESSIONAL DISTRICT.

Lindley H. Hadley (Republican).....	20,980
Mrs. Frances C. Axtell (Democrat).....	331
Mrs. Frances C. Axtell (Progressive).....	95
R. J. Olinger (Socialist).....	253

THIRD CONGRESSIONAL DISTRICT.

Albert Johnson (Republican).....	32,998
A. V. Fawcett (Republican).....	15,705
George P. Fishburne (Democrat).....	5,081
W. F. Ferguson (Socialist).....	34

FOURTH CONGRESSIONAL DISTRICT.

<i>Name</i>	<i>First Choice</i>	<i>Second Choice</i>	<i>Total</i>
William L. LaFollette (Republican).....	11,695	4,776	16,471
Harry W. Hale (Republican).....	3,672	6,067	9,739
Stephen J. Harrison (Republican).....	4,364	5,257	9,621
Will H. Fouts (Republican).....	2,826	3,118	5,944
Edward Parker (Republican).....	1,671	4,869	6,540
Chas. W. Masterson (Democrat).....			5,013
Harry W. Hale (Progressive).....			3

FIFTH CONGRESSIONAL DISTRICT.

<i>Name</i>	<i>First Choice</i>	<i>Second Choice</i>	<i>Total</i>
Alonzo M. Murphey (Republican).....	7,192	3,900	11,092
Tom Corkery (Republican).....	7,782	4,744	12,526
F. M. Goodwin (Republican).....	2,802	4,817	7,619
Charles C. Hart (Republican).....	3,707	5,135	8,842
Lloyd E. Gandy (Republican).....	2,003	3,438	5,441
John T. Mulligan (Republican).....	3,306	3,259	6,565
Guy B. Groff (Republican).....	1,022	2,470	3,492
C. C. Dill (Democrat).....			7,040
John T. Mulligan (Progressive).....			2

Governor.

<i>Name</i>	<i>First Choice</i>	<i>Second Choice</i>	<i>Total</i>
Geo. A. Lee (Republican).....	23,097	25,456	48,553
J. E. Frost (Republican).....	5,650	14,397	20,047
Henry McBride (Republican).....	45,300	33,824	79,124
James McNeely (Republican).....	19,065	22,220	41,285
Roland H. Hartley (Republican).....	38,615	29,623	68,238
John G. Lewis (Republican).....	7,444	13,568	21,012
Robert T. Hodge (Republican).....	18,362	25,227	43,589
W. J. Sutton (Republican).....	29,400	21,989	51,389
William Edwin Cass (Democrat).....			3,794
Ernest Lister (Democrat).....			28,620
James E. Bradford (Progressive).....			325

Lieutenant Governor.

<i>Name</i>	<i>First Choice</i>	<i>Second Choice</i>	<i>Total</i>
Louis F. Hart (Republican).....	77,979	31,957	109,936
Arthur W. Davis (Republican).....	42,643	47,355	89,998
Geo. H. Baker (Republican).....	25,856	51,079	76,935
Loren H. Brewer (Republican).....	17,898	33,907	51,805
Thomas Lally (Democrat).....			26,820
A. W. Davis (Progressive).....			34

Secretary of State.

I. M. Howell (Republican).....	114,760
W. H. Ford (Republican).....	54,519
J. M. Tadlock (Democrat).....	25,841
Frank A. Rust (Progressive).....	292

State Treasurer.

<i>Name</i>	<i>First Choice</i>	<i>Second Choice</i>	<i>Total</i>
W. W. Sherman (Republican).....	63,724	37,719	101,443
Calvin J. Carr (Republican).....	47,221	36,756	83,977
W. J. Milroy (Republican).....	14,964	27,083	42,047
Harold H. Stewart (Republican).....	29,853	43,979	73,832
J. L. Glazebrook (Republican).....	7,791	16,926	24,717
George J. Galvin (Democrat).....			25,765
George J. Galvin (Progressive).....			29

State Auditor.

C. W. Clausen (Republican).....	111,650
W. E. Cromwell (Republican).....	63,640
Otto A. Case (Democrat).....	2,572
Otto A. Case (Progressive).....	30

Attorney General.

W. V. Tanner (Republican).....	158,887
Henry Alberts McLean (Democrat).....	2,506
Henry Alberts McLean (Progressive).....	304

Commissioner of Public Lands.

Clark V. Savidge (Republican).....	159,577
Robert E. McFarland (Democrat).....	854
Joe Smith (Progressive).....	28

Superintendent of Public Instruction.

Name	First Choice	Second Choice	Total
Josephine Corliss Preston (Republican).....	77,456	80,674	108,130
M. E. Durham (Republican).....	50,282	48,388	98,665
Ruth C. Hoffman (Republican).....	81,514	63,837	95,351
DeFore Cramblitt (Republican).....	8,086	28,520	36,606
J. H. Morgan (Democrat).....			24,550
Joseph K. Hart (Progressive).....			274

State Insurance Commissioner.

H. O. Fishback (Republican).....	116,769
Calvin E. Vilas (Republican).....	47,984
J. H. Hemer (Democrat).....	28,265
L. L. Snow (Progressive).....	268

Joint State Senatorial Districts.

STATE SENATOR, FIRST DISTRICT.

W. A. Bolinger (Republican).....	2,878
M. B. Howe (Republican).....	2,621
J. W. Faulkner (Democrat).....	1,715

STATE SENATOR, TENTH DISTRICT.

Elgin V. Kuykendall (Republican).....	1,493
W. L. Howell (Democrat).....	63
C. J. Thronson (Democrat).....	98

STATE SENATOR, ELEVENTH DISTRICT.

Elbert M. Chandler (Republican).....	1,127
W. O. Miller (Republican).....	1,035
O. T. Cornwell (Republican).....	1,361
E. G. Cox (Democrat).....	909

STATE SENATOR, THIRTEENTH DISTRICT.

J. B. Adams (Republican).....	4,798
John Feryman (Democrat).....	75
J. B. Adams (Democrat).....	30

STATE SENATOR, FIFTEENTH DISTRICT.

D. V. Morthland (Republican).....	5,788
C. E. Lum (Republican).....	3,180
H. C. Davis (Democrat).....	997

STATE SENATOR, TWENTY-THIRD DISTRICT.

Peter Iverson (Republican).....	3,354
R. W. Condon (Republican).....	3,280
Marcus M. Bowman (Democrat).....	559

NON-PARTISAN JUDICIARY TICKET.

Supreme Court Judges.

(For six-year term vote for three; for four-year, vote for one.)

SIX-YEAR TERM.

Emmett N. Parker.....	124,218
Mark A. Fullerton.....	124,103
George E. Morris.....	119,897
Charles E. Claypool.....	87,186
Edgar G. Mills.....	109,699
Peter Husby.....	188

FOUR-YEAR TERM.

J. Stanley Webster.....	117,580
Elihu F. Barker.....	70,365

Judges for the Superior Court.

THURSTON AND MASON COUNTIES.

(Two to be elected)

John R. Mitchell.....	4,496
D. F. Wright.....	4,343

DOUGLAS AND GRANT COUNTIES.

(One to be elected)

Sam B. Hill.....	2,566
W. E. Southard.....	1,056

PACIFIC AND WAHKIAKUM COUNTIES.

(One to be elected)

H. W. B. Hewen.....	1,611
J. J. Brumbach.....	950
Solomon Smith	658
Edward H. Wright.....	1,090

BENTON, FRANKLIN AND ADAMS COUNTIES.

(One to be elected)

Edward A. Davis.....	1,310
John Truax	1,476
G. W. Hamilton.....	726
M. M. Moulton.....	1,232

STEVENS AND PEND OREILLE COUNTIES.

(One to be elected)

Daniel H. Carey.....	1,710
F. Leo. Grinstead.....	1,720
J. A. Rochford.....	982

FERRY AND OKANOGAN COUNTIES.

(One to be elected)

E. K. Pendergast.....	2,517
Charles H. Neal.....	2,266

KLICKITAT, SKAMANIA AND COWLITZ COUNTIES.

(One to be elected)

William T. Darch.....	3,553
B. L. Hubbell.....	2,187

JEFFERSON, ISLAND AND CLALLAM COUNTIES.

(One to be elected)

J. M. Balston.....	4,506
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COLUMBIA, GARFIELD AND ASOTIN COUNTIES.

(One to be elected)

Chester F. Miller.....	2,011
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SKAGIT AND SAN JUAN COUNTIES.

(One to be elected)

Augustus Brawley	5,931
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ABSTRACT OF VOTES, PRIMARY ELECTION, 1916.

REPUBLICAN TICKET.

Total First and Second
Choice Votes

1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33	33
34	34
35	35
36	36
37	37
38	38
39	39
40	40

REPUBLICAN TICKET—Continued.

U. S. SENATOR
(Continued)

REPRESENTATIVE IN CONGRESS

Totals.....	8,377	21,844	38,421	8,337	4,000	12,007	1,954	2,000	5,359
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REPUBLICAN TICKET—Continued.

COUNTIES		REPRESENTATIVE IN CONGRESS								
		First District—Continued								
		H. E. Foster First Choice Votes	H. E. Foster Second Choice Votes	H. E. Foster Total First and Second Choice Votes	J. Y. O. Kellogg First Choice Votes	J. Y. O. Kellogg Second Choice Votes	J. Y. O. Kellogg Total First and Second Choice Votes	James Wesley Bryan First Choice Votes	James Wesley Bryan Second Choice Votes	James Wesley Bryan Total First and Second Choice Votes
1	Adams									1
2	Asotin									2
3	Benton									3
4	Chelan									4
5	Clallam									5
6	Clarke									6
7	Columbia									7
8	Cowlitz									8
9	Douglas									9
10	Ferry									10
11	Franklin									11
12	Garfield									12
13	Grant									13
14	Grays Harbor ..									14
15	Island									15
16	Jefferson									16
17	King	1,010	1,925	2,935	2,014	3,638	5,652	3,279	3,600	6,879
18	Kitsap	55	169	224	94	295	389	1,684	495	2,179
19	Kittitas									19
20	Klickitat									20
21	Lewis									21
22	Lincoln									22
23	Mason									23
24	Okanogan									24
25	Pacific									25
26	Pend Oreille ..									26
27	Pierce									27
28	San Juan									28
29	Skagit									29
30	Skamania									30
31	Snohomish									31
32	Spokane									32
33	Stevens									33
34	Thurston									34
35	Wahkiakum									35
36	Walla Walla									36
37	Whatcom									37
38	Whitman									38
39	Yakima									39
Totals.....		1,065	2,094	3,159	2,108	3,983	6,041	4,963	4,09	9,058

REPUBLICAN TICKET—Continued.

COUNTIES		REPRESENTATIVE IN CONGRESS								
		First District—Continued								
		John E. Ballaine First Choice Votes	John E. Ballaine Second Choice Votes	John E. Ballaine Total First and Second Choice Votes	John F. Miller First Choice Votes	John F. Miller Second Choice Votes	John F. Miller Total First and Second Choice Votes	Lincoln Davis First Choice Votes	Lincoln Davis Second Choice Votes	Lincoln Davis Total First and Second Choice Votes
1	Adams									1
2	Asotin									2
3	Benton									3
4	Chelan									4
5	Clallam									5
6	Clarke									6
7	Columbia									7
8	Cowlitz									8
9	Douglas									9
10	Ferry									10
11	Franklin									11
12	Garfield									12
13	Grant									13
14	Grays Harbor									14
15	Island									15
16	Jefferson									16
17	King	7,099	6,101	13,197	8,171	7,128	15,500	1,618	2,729	4,347
18	Kitsap	582	799	1,381	582	473	806	156	331	487
19	Kittitas									19
20	Klickitat									20
21	Lewis									21
22	Lincoln									22
23	Mason									23
24	Okanogan									24
25	Pacific									25
26	Pend Oreille									26
27	Pierce									27
28	San Juan									28
29	Shagit									29
30	Skamania									30
31	Snohomish									31
32	Spokane									32
33	Stevens									33
34	Thurston									34
35	Wahkiakum									35
36	Walla Walla									36
37	Whatcom									37
38	Whitman									38
39	Yakima									39
Totals.....		7,689	6,900	14,589	8,753	7,601	16,356	1,774	3,060	4,834

REPUBLICAN TICKET—Continued.

COUNTIES		REPRESENTATIVE IN CONGRESS								
		First District—Continued						2nd Dist.	Third District	
		Frank Pierce First Choice Votes	Frank Pierce Second Choice Votes	Frank Pierce Total First and Second Choice Votes	Daniel Landon First Choice Votes	Daniel Landon Second Choice Votes	Daniel Landon Total First and Second Choice Votes	Lindley H. Hadley	Albert Johnson	A. V. Fawcett
1	Adams									
2	Anotin									
3	Benton									
4	Chelan									
5	Clallam							853		
6	Clarke								8,079	1,042
7	Columbia								1,883	380
8	Cowlitz									
9	Douglas									
10	Ferry									
11	Franklin									
12	Garfield									
13	Grant									
14	Grays Harbor								5,291	1,250
15	Island							613		
16	Jefferson							1,187		
17	King	727	2,164	2,891	7,960	6,388	14,348	2,885		
18	Kitsap	162	451	613	241	607	848			
19	Kittitas									
20	Klickitat									
21	Lewis								3,327	1,513
22	Lincoln									
23	Mason								585	195
24	Okanogan									
25	Pacific								2,308	456
26	Pend Oreille									
27	Pierce								12,342	9,080
28	San Juan							321		
29	Skaagit							2,100		
30	Skamania								444	106
31	Snohomish							5,487		
32	Spokane									
33	Stevens									
34	Thurston								2,738	740
35	Wahkiakum								670	84
36	Walla Walla									
37	Whatcom							5,487		
38	Whitman									
39	Yakima									
	Totals.....	989	2,595	3,484	8,191	6,995	15,181	20,980	22,998	15,765

REPUBLICAN TICKET—Continued.

REPRESENTATIVE IN CONGRESS

Fourth District

COUNTIES

		William L. La Follette First Choice Votes	William L. La Follette Second Choice Votes	William L. La Follette Total First and Second Choice Votes	Harry W. Hale First Choice Votes	Harry W. Hale Second Choice Votes	Harry W. Hale Total First and Second Choice Votes	Stephen J. Harrison First Choice Votes	Stephen J. Harrison Second Choice Votes	Stephen J. Harrison Total First and Second Choice Votes	
1	Adams	459	122	581	188	260	308	111	171	307	1
2	Asotin	348	62	410	47	123	180	24	26	119	2
3	Benton	622	340	962	121	416	547	584	230	874	3
4	Chelan										4
5	Clallam										5
6	Clarke										6
7	Columbia	111	260	397	15	212	227	24	65	89	7
8	Cowlitz										8
9	Douglas										9
10	Ferry										10
11	Franklin	461	97	558	109	190	305	87	120	187	11
12	Garfield	116	79	195	18	47	65	36	66	102	12
13	Grant	754	196	950	249	406	655	80	212	292	13
14	Grays Harbor ..										14
15	Island										15
16	Jefferson										16
17	King										17
18	Kitsap										18
19	Kittitas	846	656	1,502	1,196	491	1,689	241	560	801	19
20	Klickitat	987	281	1,268	279	521	800	236	360	596	20
21	Lewis										21
22	Lincoln										22
23	Mason										23
24	Okanogan										24
25	Pacific										25
26	Pend Oreille ..										26
27	Pierce										27
28	San Juan										28
29	Shagit										29
30	Shamania										30
31	Snohomish										31
32	Spokane										32
33	Stevens										33
34	Thurston										34
35	Wahkiakum										35
36	Walla Walla	2,002	927	2,929	191	725	919	325	726	1,061	36
37	Whatecom										37
38	Whitman	2,633	829	2,962	231	982	1,163	327	907	1,234	38
39	Yakima	2,349	1,418	3,767	1,052	1,730	2,783	2,216	1,683	3,900	39
	Totals.....	11,696	4,776	16,471	3,672	6,097	9,739	4,364	5,237	9,601	

REPUBLICAN TICKET—Continued

COUNTIES		REPRESENTATIVE IN CONGRESS								
		Fourth District—Continued						Fifth District		
		Will H. Fouts First Choice Votes	Will H. Fouts Second Choice Votes	Will H. Fouts Total First and Second Choice Votes	Edward Parker First Choice Votes	Edward Parker Second Choice Votes	Edward Parker Total First and Second Choice Votes	Alonso M. Murphey First Choice Votes	Alonso M. Murphey Second Choice Votes	Alonso M. Murphey Total First and Second Choice Votes
1	Adams	39	106	145	61	192	252			
2	Anotin	102	116	218	35	114	149			
3	Benton	30	108	138	33	227	270			
4	Chelan							654	492	1,146
5	Clallam									
6	Clarke									
7	Columbia	500	69	569	19	129	148			
8	Cowlitz									
9	Douglas							141	120	261
10	Ferry							189	30	219
11	Franklin	36	106	142	42	154	196			
12	Garfield	122	72	204	15	52	67			
13	Grant	41	102	143	79	209	248			
14	Grays Harbor ..									
15	Island									
16	Jefferson									
17	King									
18	Kitsap									
19	Kittitas	48	216	264	150	630	680			
20	Klickitat	65	174	239	111	245	456			
21	Lewis									
22	Lincoln							415	211	626
23	Mason									
24	Okanogan							444	425	879
25	Pacific									
26	Pend Oreille ..							845	165	510
27	Pierce									
28	San Juan									
29	Shagit									
30	Shamania									
31	Snohomish									
32	Spokane							4,540	2,155	6,695
33	Stevens							464	242	706
34	Thurston									
35	Wahkiakum									
36	Walla Walla	1,837	1,086	2,473	165	522	747			
37	Whatecom									
38	Whitman	181	473	654	173	808	1,071			
39	Yakima	175	495	670	732	1,313	2,050			
	Totals.....	2,826	3,113	5,944	1,671	4,699	6,540	7,192	3,900	11,092

REPUBLICAN TICKET—Continued.

REPRESENTATIVE IN CONGRESS

Fifth District—Continued

COUNTIES									
	Tom Corkery First Choice Votes	Tom Corkery Second Choice Votes	Tom Corkery Total First and Second Choice Votes	F. M. Goodwin First Choice Votes	F. M. Goodwin Second Choice Votes	F. M. Goodwin Total First and Second Choice Votes	Charles O. Hart First Choice Votes	Charles O. Hart Second Choice Votes	Charles O. Hart Total First and Second Choice Votes
1 Adams									
2 Asotin									
3 Benton									
4 Chelan	589	583	1,072	280	208	618	817	883	1,700
5 Challis									
6 Clarke									
7 Columbia									
8 Cowitz									
9 Douglas	120	122	242	62	119	181	247	164	411
10 Ferry	■	80	180	29	48	77	56	94	150
11 Franklin									
12 Garfield									
13 Grant									
14 Grays Harbor									
15 Island									
16 Jefferson									
17 King									
18 Kitsap									
19 Kittitas									
20 Klickitat									
21 Lewis									
22 Lincoln	228	236	464	169	209	378	206	289	495
23 Mason									
24 Okanogan	597	447	1,044	173	264	437	743	588	1,281
25 Pacific									
26 Pend Oreille	240	184	424	78	184	267	118	211	324
27 Pierce									
28 San Juan									
29 Skagit									
30 Skamania									
31 Snohomish									
32 Spokane	5,590	2,886	8,475	1,879	3,449	5,328	1,371	2,666	4,037
33 Stevens	397	249	615	167	226	393	154	290	444
34 Thurston									
35 Wahkiakum									
36 Walla Walla									
37 Whatcom									
38 Whitman									
39 Yakima									
Totals	7,792	4,744	12,536	2,803	4,817	7,619	3,707	5,185	8,842

REPUBLICAN TICKET—Continued.

COUNTIES		REPRESENTATIVE IN CONGRESS								
		Fifth District—Continued								
		Lloyd E. Gandy First Choice Votes	Lloyd E. Gandy Second Choice Votes	Lloyd E. Gandy Total First and Second Choice Votes	John T. Mulligan First Choice Votes	John T. Mulligan Second Choice Votes	John T. Mulligan Total First and Second Choice Votes	Guy B. Groff First Choice Votes	Guy B. Groff Second Choice Votes	Guy B. Groff Total First and Second Choice Votes
1	Adams									
2	Anotin									
3	Denton									
4	Chelan	194	242	436	794	569	1,363	68	306	374
5	Clallam									
6	Clarke									
7	Columbia									
8	Cowlitz									
9	Douglas	28	11	39	165	92	257	24	45	69
10	Ferry	16	11	27	25	36	61	19	15	34
11	Franklin									
12	Garfield									
13	Grant									
14	Grays Harbor									
15	Island									
16	Jefferson									
17	King									
18	Kitsap									
19	Kittitas									
20	Klickitat									
21	Lewis									
22	Lincoln	151	212	363	159	140	299	23	59	82
23	Mason									
24	Okanogan	101	202	303	108	179	287	45	146	191
25	Pacific									
26	Pend Oreille	69	153	222	149	106	254	56	88	144
27	Pierce									
28	San Juan									
29	Skagit									
30	Skamania									
31	Snohomish									
32	Spokane	1,874	2,418	4,292	1,796	2,962	4,758	722	1,778	2,500
33	Stevens	76	122	198	171	189	360	48	101	149
34	Thurston									
35	Wahkiakum									
36	Walla Walla									
37	Whatecom									
38	Whitman									
39	Yakima									
Totals.....		2,005	2,445	4,450	3,305	3,280	6,585	1,022	2,470	3,497

REPUBLICAN TICKET—Continued.

REPUBLICAN TICKET—Continued.

COUNTIES		GOVERNOR—Continued						John G. Lewis Second Choice Votes		John G. Lewis Total First and Second Choice Votes
		James McNeely First Choice Votes	James McNeely Second Choice Votes	James McNeely Total First and Second Choice Votes	Roland H. Hartley First Choice Votes	Roland H. Hartley Second Choice Votes	Roland H. Hartley Total First and Second Choice Votes			
1	Adams	41	121	162	71	159	230	23	138	1
2	Anotin	13	28	41	109	105	214	28	127	2
3	Benton	114	230	344	254	225	479	45	338	3
4	Chelan	180	233	413	705	507	1,212	135	174	4
5	Clallam	130	192	322	429	232	711	41	301	5
6	Clarke	397	747	1,144	436	550	986	140	304	6
7	Columbia	56	80	136	133	129	262	28	85	7
8	Cowlitz	139	299	438	111	224	335	108	304	8
9	Douglas	37	71	108	106	123	234	33	85	9
10	Ferry	26	66	92	58	39	97	27	67	10
11	Franklin	49	38	185	74	79	158	36	111	11
12	Garfield	19	30	49	55	51	106	6	108	12
13	Grant	32	152	234	162	223	380	23	4,016	13
14	Grays Harbor ...	397	673	1,075	359	1,160	2,019	2,975	79	14
15	Island	66	108	174	430	176	606	24	413	15
16	Jefferson	143	200	343	413	332	750	135	3,903	16
17	King	1,251	3,095	4,346	14,457	8,332	23,289	573	3,344	17
18	Kitsap	343	503	846	777	711	1,488	86	12	18
19	Kittitas	133	236	424	475	350	825	41	230	19
20	Klickitat	192	279	471	463	235	763	78	84	20
21	Lewis	307	347	1,654	947	637	1,634	332	32	21
22	Lincoln	59	162	221	133	224	357	16	86	22
23	Mason	133	157	295	233	142	375	20	351	23
24	Okanogan	174	227	401	215	234	449	141	761	24
25	Pacific	399	403	807	433	373	811	352	93	25
26	Pend Oreille	30	67	97	113	161	279	34	1,547	26
27	Pierce	9,060	4,353	13,413	3,305	3,649	7,454	365	96	27
28	San Juan	43	33	134	255	200	455	12	493	28
29	Skagit	315	637	952	1,251	954	2,205	114	52	29
30	Skamania	42	45	87	26	32	58	19	924	30
31	Snohomish	631	1,344	1,975	3,629	919	4,548	151	1,227	31
32	Spokane	440	2,045	2,485	2,154	3,053	5,210	226	150	32
33	Stevens	53	142	195	101	193	299	42	750	33
34	Thurston	396	530	1,476	312	601	1,113	271	103	34
35	Wahkiakum	24	56	80	45	62	107	47	479	35
36	Walla Walla	432	539	971	677	573	1,255	95	56	36
37	Whatcom	616	365	1,481	2,051	1,357	3,408	194	222	37
38	Whitman	303	529	835	443	534	1,007	190	463	38
39	Yakima	727	1,012	1,739	1,000	1,065	2,065	233	353	39
Totals		19,065	22,220	41,285	33,615	29,623	63,238	7,444	13,603	21,012

REPUBLICAN TICKET—Continued.

REPUBLICAN TICKET—Continued.

COUNTIES	LIEUTENANT GOVERNOR—Continued								
	Arthur W. Davis First Choice Votes	Arthur W. Davis Second Choice Votes	Arthur W. Davis Total First and Second Choice Votes	Geo. H. Baker First Choice Votes	Geo. H. Baker Second Choice Votes	Geo. H. Baker Total First and Second Choice Votes	Loren H. Brewer First Choice Votes	Loren H. Brewer Second Choice Votes	Loren H. Brewer Total First and Second Choice Votes
	28	210	238	28	210	238	28	196	124
	15	147	162	15	147	162	15	94	168
	15	349	364	15	349	364	15	308	321
	15	925	1,453	15	925	1,453	15	439	585
	15	460	720	15	460	720	15	300	409
	15	1,073	2,771	15	1,073	2,771	15	502	1,190
	15	306	308	15	306	308	15	49	185
	15	579	1,087	15	579	1,087	15	232	361
	15	196	286	15	196	286	15	60	125
	15	117	191	15	117	191	15	21	85
	15	180	278	15	180	278	15	68	104
	15	88	140	15	88	140	15	20	43
	15	296	509	15	296	509	15	129	192
	15	1,371	1,922	15	1,371	1,922	15	2,162	3,401
	15	298	476	15	298	476	15	90	174
	15	500	710	15	500	710	15	195	310
	15	14,849	20,668	15	14,849	20,668	15	2,887	9,189
	15	1,356	1,961	15	1,356	1,961	15	490	785
	15	685	1,280	15	685	1,280	15	190	307
	15	288	1,215	15	288	1,215	15	121	465
	15	1,125	1,843	15	1,125	1,843	15	555	915
	15	342	580	15	342	580	15	100	200
	15	208	324	15	208	324	15	92	176
	15	602	1,006	15	602	1,006	15	125	302
	15	741	1,145	15	741	1,145	15	271	552
	15	252	390	15	252	390	15	60	134
	15	5,721	7,761	15	5,721	7,761	15	1,360	4,768
	15	261	417	15	261	417	15	108	167
	15	1,740	2,578	15	1,740	2,578	15	461	804
	15	138	308	15	138	308	15	40	75
	15	2,612	4,278	15	2,612	4,278	15	1,221	3,174
	15	5,179	7,300	15	5,179	7,300	15	1,226	2,826
	15	872	1,158	15	872	1,158	15	158	233
	15	625	1,205	15	625	1,205	15	641	1,073
	15	140	317	15	140	317	15	68	92
	15	1,140	1,872	15	1,140	1,872	15	477	685
	15	2,171	3,367	15	2,171	3,367	15	787	1,508
	15	1,015	1,585	15	1,015	1,585	15	309	597
	15	1,719	2,124	15	1,719	2,124	15	822	1,151
	59	51,079	76,865	59	51,079	76,865	59	17,898	28,907
									51,805

REPUBLICAN TICKET—Continued.

REPUBLICAN TICKET—Continued.

REPUBLICAN TICKET—Continued.

REPUBLICAN TICKET—Continued.

REPUBLICAN TICKET—Continued.

		STATE INSURANCE COMMISSIONER		
		H. O. Fishback	Calvin E. Vilas	
COUNTIES				
1	Adams	684	168	1
2	Asotin	350	142	2
3	Benton	987	396	3
4	Chelan	2,275	866	4
5	Clallam	1,088	457	5
6	Clarke	3,596	1,218	6
7	Columbia	522	173	7
8	Cowlitz	1,248	880	8
9	Douglas	829	186	9
10	Ferry	271	128	10
11	Franklin	487	169	11
12	Garfield	229	64	12
13	Grant	815	358	13
14	Grays Harbor	4,559	1,450	14
15	Island	702	282	15
16	Jefferson	1,089	450	16
17	King	26,679	14,928	17
18	Kitsap	2,571	1,266	18
19	Kittitas	1,684	587	19
20	Klickitat	1,087	547	20
21	Lewis	3,405	1,868	21
22	Lincoln	1,080	244	22
23	Mason	540	165	23
24	Okanogan	1,397	614	24
25	Pacific	1,899	549	25
26	Pend Oreille	657	288	26
27	Pierce	14,880	5,480	27
28	San Juan	540	268	28
29	Skagit	3,446	1,837	29
30	Skamania	322	141	30
31	Snohomish	5,911	2,408	31
32	Spokane	11,916	4,077	32
33	Stevens	985	434	33
34	Thurston	2,814	742	34
35	Wahkiakum	375	157	35
36	Walla Walla	2,980	846	36
37	Whatcom	5,819	1,932	37
38	Whitman	2,395	669	38
39	Yakima	4,668	1,684	39
Totals.....		116,769	47,984	

DEMOCRATIC TICKET.

COUNTIES		Total Number of Votes Cast in Each County	UNITED STATES SENATOR		REPRESENTATIVE IN CONGRESS						
			Robert Bridges	George Turner	1st Dist.	2nd District		3rd Dist.	4th Dist.	5th District	
					George F. Otterill	Frances C. Axtell	Lindley H. Hadley	George P. Fishburne	Chas. W. Masterson	O. O. Dill	
1	Adams	451	79	287	.....	.....	.....	.....	288	.....	1
2	Asotin	198	87	127	.....	.....	.....	.....	183	.....	2
3	Benton	412	78	228	.....	.....	.....	.....	248	.....	3
4	Chelan	444	68	292	.....	.....	.....	.....	.....	370	4
5	Clallam	166	47	82	.....	16	4	.....	.....	.....	5
6	Clarke	369	85	197	.....	.....	.....	274	.....	.....	6
7	Columbia	412	69	242	.....	.....	.....	.....	259	.....	7
8	Cowlitz	207	45	128	.....	.....	.....	163	.....	.....	8
9	Douglas	844	166	502	.....	.....	.....	.....	.....	696	9
10	Ferry	701	78	487	.....	.....	.....	.....	.....	569	10
11	Franklin	336	50	224	.....	.....	.....	.....	232	.....	11
12	Garfield	138	12	104	.....	.....	.....	.....	94	.....	12
13	Grant	382	77	284	.....	.....	.....	.....	284	.....	13
14	Grays Harbor ...	571	164	310	.....	.....	.....	380	.....	.....	14
15	Island	122	34	66	.....	29	.....	.....	.....	.....	15
16	Jefferson	41	10	23	.....	11	.....	.....	.....	.....	16
17	King	9,653	4,298	4,142	5,464	.....	.....	.....	.....	.....	17
18	Kitsap	333	110	159	255	.....	.....	.....	.....	.....	18
19	Kittitas	652	136	381	.....	.....	.....	.....	415	.....	19
20	Klickitat	177	33	115	.....	.....	.....	.....	141	.....	20
21	Lewis	877	240	481	.....	.....	.....	671	.....	.....	21
22	Lincoln	940	98	633	.....	.....	.....	.....	.....	766	22
23	Mason	448	101	215	.....	.....	.....	266	.....	.....	23
24	Okanogan	661	91	455	.....	.....	.....	.....	.....	554	24
25	Pacific	289	58	185	.....	.....	.....	172	.....	.....	25
26	Pend Oreille	242	56	180	.....	.....	.....	.....	.....	211	26
27	Pierce	3,458	1,088	1,830	.....	.....	.....	2,752	.....	.....	27
28	San Juan	58	19	19	.....	11	.....	.....	.....	.....	28
29	Skagit	592	160	311	.....	36	.....	.....	.....	.....	29
30	Skamania	189	23	56	.....	.....	.....	86	.....	.....	30
31	Snohomish	1,228	307	608	.....	113	12	.....	.....	.....	31
32	Spokane	3,317	557	2,430	.....	.....	.....	.....	.....	2,789	32
33	Stevens	1,261	211	841	.....	.....	.....	.....	.....	1,085	33
34	Thurston	399	140	190	.....	.....	.....	300	.....	.....	34
35	Wahkiakum	28	5	21	.....	.....	.....	18	.....	.....	35
36	Walla Walla	1,349	175	989	.....	.....	.....	.....	1,018	.....	36
37	Whatcom	981	207	540	.....	115	.....	.....	.....	.....	37
38	Whitman	1,842	197	1,294	.....	.....	.....	.....	1,229	.....	38
39	Yakima	989	239	549	.....	.....	.....	.....	677	.....	39
Totals.....		35,562	9,628	20,002	5,719	331	16	5,081	5,018	7,040	

DEMOCRATIC TICKET—Continued.

COUNTIES		GOVERNOR		LIEUT. GOV.	SEC. OF STATE	STATE TREASURER	
		William Edwin Case	Ernest Lister	Thomas Lally	J. M. Tadlock	Geo. J. Galvin	
1	Adams	48	253	221	304	306	1
2	Anotin	18	145	148	146	150	2
3	Benton	23	226	275	273	263	3
4	Chelan	23	309	345	341	342	4
5	Clallam	18	180	117	104	112	5
6	Clarke	92	235	239	235	230	6
7	Columbia	40	313	239	274	277	7
8	Cowlitz	20	175	177	190	177	8
9	Douglas	62	669	639	514	606	9
10	Ferry	101	499	498	473	472	10
11	Franklin	30	205	244	242	235	11
12	Garfield	5	121	109	104	110	12
13	Grant	73	251	295	294	291	13
14	Grays Harbor	61	450	397	394	395	14
15	Island	3	104	97	89	96	15
16	Jefferson .....	.....	33	36	36	36	16
17	King	1,011	7,981	7,013	6,692	6,541	17
18	Kitsap	23	264	250	250	260	18
19	Kittitas	68	490	423	432	422	19
20	Klickitat	16	147	143	142	147	20
21	Lewis	101	710	667	680	699	21
22	Lincoln	68	823	750	725	715	22
23	Mason	60	330	239	231	230	23
24	Okanogan	39	565	496	451	■	24
25	Pacific	46	172	171	167	172	25
26	Pend Oreille	12	203	139	191	139	26
27	Pierce	483	2,760	2,765	2,633	2,704	27
28	San Juan	4	33	33	39	33	28
29	Skegit	60	473	469	445	451	29
30	Skamania	22	91	89	87	83	30
31	Snohomish	133	964	895	841	804	31
32	Spokane	235	2,727	2,723	2,570	2,620	32
33	Stevens	110	1,027	969	959	960	33
34	Thurston	32	222	306	301	296	34
35	Wahkiakum .....	.....	25	21	19	22	35
36	Walla Walla	124	1,091	972	920	984	36
37	Whitcom	123	711	713	694	■	37
38	Whitman	211	1,438	1,436	1,408	1,394	38
39	Yakima	73	301	737	727	712	39
Totals.....		3,794	23,620	23,820	23,841	23,765	

DEMOCRATIC TICKET—Continued.

COUNTIES		STATE AUD.	ATTY GEN.	COM. OF PUBLIC LANDS	SUPT. OF PUBLIC INST.	STATE INS. COM.	
		Otto A. Case	Henry Alberts McLean	Robert E. McFarland	J. H. Morgan	J. H. Hemer	
1	Adams	5	5	.....	300	274	1
2	Asotin	15	15	.....	137	132	2
3	Benton	13	12	.....	274	249	3
4	Chelan	11	14	1	314	300	4
5	Clallam	18	16	.....	98	95	5
6	Clarke	33	48	12	225	225	6
7	Columbia	63	66	.....	282	265	7
8	Cowlitz	56	52	8	165	152	8
9	Douglas	21	10	.....	552	542	9
10	Ferry	8	10	.....	434	433	10
11	Franklin	12	17	.....	218	218	11
12	Garfield	6	3	.....	100	98	12
13	Grant	15	13	.....	272	257	13
14	Grays Harbor .....	.....	.....	.....	400	374	14
15	Island	30	26	4	88	87	15
16	Jefferson	12	10	.....	35	33	16
17	King	780	737	290	6,298	5,913	17
18	Kitsap .....	.....	.....	.....	228	221	18
19	Kittitas	46	45	33	490	387	19
20	Klickitat	6	7	.....	132	131	20
21	Lewis	86	84	47	614	596	21
22	Lincoln	22	23	.....	715	669	22
23	Mason	25	19	6	271	254	23
24	Okanogan	53	57	.....	489	451	24
25	Pacific	13	13	4	162	148	25
26	Pend Oreille	9	7	.....	182	173	26
27	Pierce	493	516	394	2,478	2,387	27
28	San Juan	2	19	.....	37	37	28
29	Skagit	33	33	.....	423	414	29
30	Skamania	2	2	.....	79	79	30
31	Snohomish	112	102	34	816	772	31
32	Spokane	202	199	.....	2,475	2,360	32
33	Stevens	2	2	.....	879	868	33
34	Thurston	72	58	10	275	257	34
35	Wahkiakum .....	.....	.....	.....	16	14	35
36	Walla Walla	146	124	.....	888	889	36
37	Whatcom .....	.....	.....	.....	634	609	37
38	Whitman	107	107	6	1,352	1,277	38
39	Yakima	28	30	5	714	680	39
Totals.....		2,572	2,506	854	24,550	23,205	

PROGRESSIVE TICKET.

COUNTIES		Total Number of Votes Cast in Each County	U. S. SEN.	REPRESENTATIVE IN CONGRESS					GOV.	LIEUT. GOV.	
				1st Dist.	2nd Dist.	3rd Dist.	4th Dist.	5th Dist.			
			Walter J. Thompson	George F. Otterhill	Mrs. Frances O. Artell	W. F. Ferguson	Harry W. Hale	John T. Mulligan	James E. Bradford	A. W. Davis	
1	Adams	2	2						2		1
2	Asotin	0									2
3	Benton	0									3
4	Chelan	7	6						4		4
5	Clallam	2	2		2				2		5
6	Clarke	2	2						2		6
7	Columbia	1	1						1		7
8	Cowlitz	2				2					8
9	Douglas	2	1						2		9
10	Ferry	0									10
11	Franklin	0									11
12	Garfield	1									12
13	Grant	2	2				2		2		13
14	Grays Harbor	2	2						2		14
15	Island	0									15
16	Jefferson	1			1				1		16
17	King	100	105	17	21				125	26	17
18	Kitsap	12	9						8		18
19	Kittitas	4	2						2		19
20	Klickitat	1	1						1		20
21	Lewis	1	1						1		21
22	Lincoln	1	1						1		22
23	Mason	0									23
24	Okanogan	0									24
25	Pacific	2	2						2		25
26	Pend Oreille	1	1						1		26
27	Pierce	26	27						26		27
28	San Juan	1	1		1				1		28
29	Shagit	24	16		16				17	2	29
30	Skamania	0									30
31	Snohomish	43	14		1				21	4	31
32	Spokane	25	16					2	16	1	32
33	Stevens	6	2						2		33
34	Thurston	2	2						2		34
35	Wahkiakum	2	1						1		35
36	Walla Walla	1	1						1		36
37	Whatecom	52	20		22				42		37
38	Whitman	4	2						2		38
39	Yakima	1							1		39
Totals.....		429	226	17	26	2	2	2	225	34	

PROGRESSIVE TICKET—Continued.

		SEC. OF STATE	STATE TREAS.	STATE AUD.	ATT'Y GEN.	COM. PUB. LANDS	SUPT. PUB. INST.	STATE INS. COM.	
COUNTIES		Frank A. Rust	George J. Galvin	Otto Oase	Henry Alberts McLean	Joe Smith	Joseph K. Hart	L. L. Snow	
1	Adams	2			2		1	1	1
2	Asotin								2
3	Benton								3
4	Chelan	5			5		5	4	4
5	Clallam	2			2		2	2	5
6	Clarke	2			1		1	2	6
7	Columbia	1			1		1	1	7
8	Cowlitz								8
9	Douglas	2			1		2	3	9
10	Ferry								10
11	Franklin				1		1	1	11
12	Garfield								12
13	Grant	4	1		5		6	5	13
14	Grays Harbor	2			3		3	3	14
15	Island								15
16	Jefferson	1			1		1	1	16
17	King	109	16	25	106	22	89	87	17
18	Kitsap	7			8		7	7	18
19	Kittitas	3			4		3	3	19
20	Klickitat	1			1		1	1	20
21	Lewis	1			1				21
22	Lincoln	1			1		1	1	22
23	Mason								23
24	Okanogan								24
25	Pacific	2			1		1	1	25
26	Pend Oreille				1		1		26
27	Pierce	51			55		51	48	27
28	San Juan	1			1		1	1	28
29	Skagit	15	3	2	15	3	15	16	29
30	Skamania								30
31	Snohomish	20	4	2	22	3	19	18	31
32	Spokane	14		1	16		17	12	32
33	Stevens	2			2		2	2	33
34	Thurston	3			2		3	3	34
35	Wahkiakum	1			1		1	1	35
36	Walla Walla	1			1		1	1	36
37	Whatcom	36			40		33	33	37
38	Whitman	2			4		4	4	38
39	Yakima	1					1	1	39
Totals.....		292	24	30	304	23	274	263	

SOCIALIST TICKET.

COUNTIES		Total Vote	U. S. Senator		Rep. in Cong. 2nd Dist.		State Senator 28rd Dist.		Governor		Lieut. Governor		Secretary of State		
			Bruce Rogers	Scattering	B. J. Olinger	Scattering	O. A. Johnson	Scattering	L. E. Katterfeld	Scattering	Katherine H. Hodgins	Scattering	James Grant	Scattering	
1	Adams														1
2	Asotin														2
3	Benton														3
4	Chelan														4
5	Challam														5
6	Clarke														6
7	Columbia														7
8	Cowlitz														8
9	Douglas														9
10	Ferry														10
11	Franklin														11
12	Garfield														12
13	Grant														13
14	Grays Harbor														14
15	Island	27					10	2							15
16	Jefferson														16
17	King		61	76	10	11			18	22	11	2	4	7	17
18	Kitsap														18
19	Kittitas														19
20	Klickitat														20
21	Lewis														21
22	Lincoln														22
23	Mason														23
24	Okanogan														24
25	Pacific														25
26	Pend Oreille														26
27	Pierce														27
28	San Juan														28
29	Skagit		9	28	68				26		16		14		29
30	Skamania														30
31	Snohomish	481			275	6			1				1		31
32	Spokane														32
33	Stevens														33
34	Thurston														34
35	Wahkiakum														35
36	Walla Walla														36
37	Whatcom														37
38	Whitman														38
39	Yakima														39
Totals.....		508	70	104	353	17	10	2	45	22	27	2	19	7	

SOCIALIST TICKET—Continued.

1	Adams												1
2	Anotin												2
3	Benton												3
4	Chelan												4
5	Clallam												5
6	Clarke												6
7	Columbia												7
8	Cowlitz												8
9	Douglas												9
10	Ferry												10
11	Franklin												11
12	Garfield												12
13	Grant												13
14	Grays Harbor												14
15	Island												15
16	Jefferson												16
17	King	4	6	4	5	4	1	■	2	4	7	■	17
18	Kitsap												18
19	Kittitas												19
20	Klickitat												20
21	Lewis												21
22	Lincoln												22
23	Mason												23
24	Okanogan												24
25	Pacific												25
26	Pend Oreille												26
27	Pierce												27
28	San Juan												28
29	Skagit	14		12		14		12		18		10	29
30	Skamania												30
31	Snohomish	1											31
32	Spokane												32
33	Stevens												33
34	Thurston												34
35	Wahkiakum												35
36	Walla Walla												36
37	Whitcom												37
38	Whitman												38
39	Yakima												39
Totals.....		19	6	16	5	18	1	16	2	17	7	14	1

NON-PARTISAN JUDICIARY TICKET.

*Recount—Number of marked ballots.

†Recount—Returns show only total marked for six-year term, state supreme court.

NON-PARTISAN JUDICIARY—Continued.

COUNTIES		Thurston and Mason		Douglas and Grant		Pacific and Wahkiakum			
		John R. Mitchell	D. F. Wright	Sam B. Hill	W. E. Southard	H. W. B. Hewen	J. J. Brumbach	Solomon Smith	Edward H. Wright
1	Adams								
2	Asotin								
3	Benton								
4	Chelan								
5	Clallam								
6	Clarke								
7	Columbia								
8	Cowlitz								
9	Douglas			1,500	228				
10	Ferry								
11	Franklin								
12	Garfield								
13	Grant			1,008	828				
14	Grays Harbor ..								
15	Island								
16	Jefferson								
17	King								
18	Kitsap								
19	Kittitas								
20	Klickitat								
21	Lewis								
22	Lincoln								
23	Mason	968	1,047						
24	Okanogan								
25	Pacific					1,481	852	400	807
26	Pend Oreille ..								
27	Pierce								
28	San Juan								
29	Skagit								
30	Skamania								
31	Snohomish								
32	Spokane								
33	Stevens								
34	Thurston	3,583	3,296						
35	Wahkiakum					180	98	249	238
36	Walla Walla								
37	Whatcom								
38	Whitman								
39	Yakima								
	Totals.....	4,496	4,343	2,506	1,056	1,611	950	658	1,090

NON-PARTISAN JUDICIARY—Continued.

COUNTIES		Klickitat, Skamania and Cowlitz		Jefferson, Island and Clallam	Colum- bia, Garfield and Asotin	Skagit and San Juan	
		William T. Darch	B. L. Hubbell	John M. Rakston	Chester F. Miller	Augustus Brawley	
1	Adams						1
2	Asotin				667		2
3	Benton						3
4	Chelan						4
5	Clallam			1,787			5
6	Clarke						6
7	Columbia				880		7
8	Cowlitz	1,426	1,265				8
9	Douglas						9
10	Ferry						10
11	Franklin						11
12	Garfield				484		12
13	Grant						13
14	Grays Harbor						14
15	Island			1,040			15
16	Jefferson			1,679			16
17	King						17
18	Kitsap						18
19	Kittitas						19
20	Klickitat	1,509	656				20
21	Lewis						21
22	Lincoln						22
23	Mason						23
24	Okanogan						24
25	Pacific						25
26	Pend Oreille						26
27	Pierce						27
28	San Juan					884	28
29	Skagit					5,097	29
30	Skamania	528	266				30
31	Snohomish						31
32	Spokane						32
33	Stevens						33
34	Thurston						34
35	Wahkiakum						35
36	Walla Walla						36
37	Whatcom						37
38	Whitman						38
39	Yakima						39
Totals.....		8,558	2,187	4,506	2,011	5,931	

JOINT STATE SENATORIAL—Continued.

COUNTIES		State Senator 13th District Ochelan and Kittitas			State Senator 15th District Yakima and Benton			State Senator 23rd District Mason, Island and Kitsap		
		Rep.		Democrat	Republican		Dem.	Republican		Dem.
		J. B. Adams	John Ferryman	J. B. Adams	D. V. Morthland	C. E. Lum	H. C. Davis	Peter Iverson	R. W. Condon	Marcus M. Bowman
1	Adams									
2	Asotin									
3	Benton				707	854	267			
4	Ochelan	2,919	57	18						
5	Clallam									
6	Clarke									
7	Columbia									
8	Cowlitz									
9	Douglas									
10	Ferry									
11	Franklin									
12	Garfield									
13	Grant									
14	Grays Harbor									
15	Island							642	580	86
16	Jefferson									
17	King									
18	Kitsap							2,367	2,298	222
19	Kittitas	1,874	18	12						
20	Klickitat									
21	Lewis									
22	Lincoln									
23	Mason							345	452	251
24	Okanogan									
25	Pacific									
26	Pend Oreille									
27	Pierce									
28	San Juan									
29	Skagit									
30	Skamania									
31	Snohomish									
32	Spokane									
33	Stevens									
34	Thurston									
35	Wahkiakum									
36	Walla Walla									
37	Whatcom									
38	Whitman									
39	Yakima				5,081	2,826	730			
Totals.....		4,798	75	80	5,738	3,180	997	3,354	3,280	559

Republican Ticket—Scattering Vote.

U. S. Senator.....	102	Representative in Congress.....	56
State Senator.....	21	Governor	100
Lieutenant Governor	34	Secretary of State.....	1
State Treasurer	21	State Auditor	6
Attorney General	20	Commissioner of Public Lands....	7
Sup't of Public Instruction.....	66	Insurance Commissioner	3

Democratic Ticket—Scattering Vote.

U. S. Senator.....	177	Representative in Congress.....	93
State Senator	45	Governor	55
Lieutenant Governor	20	Secretary of State.....	34
State Treasurer	36	State Auditor	361
Attorney General	364	Commissioner of Public Lands....	371
Sup't of Public Instruction.....	65	Insurance Commissioner	154

Progressive Ticket—Scattering Vote.

U. S. Senator.....	12	Secretary of State	2
Representative in Congress.....	30	State Treasurer.....	14
Governor	14	State Auditor	23
Lieutenant Governor	17	Commissioner of Public Lands...	12
Sup't of Public Instruction.....	8	State Insurance Commissioner...	1

**The Name of Each Candidate, the Number of
Votes Received by Each, and the Office
Sought, Is Found to be
As Follows:**

REPUBLICAN TICKET.

	<i>1st Choice.</i>	<i>2d Choice.</i>	<i>1st and 2d Choice.</i>
Representative in Congress—First District:			
W. M. Whitney.....	8,337	4,660	12,997
Frank E. Hammond.....	1,984	3,405	5,389
H. E. Foster.....	1,065	2,094	3,159
J. Y. C. Kellogg.....	2,108	3,933	6,041
James Wesley Bryan.....	4,963	4,095	9,058
John S. Ballaine.....	7,638	6,900	14,538
John F. Miller.....	8,735	7,601	16,336
Lincoln Davis	1,774	3,060	4,834
Frank Pierce	889	2,595	3,484
Daniel Landon	8,191	6,990	15,181

Representative in Congress—Second District:

Lindley H. Hadley..... 20,980

Representative in Congress—Third District:

Albert Johnson 32,998
A. V. Fawcett..... 15,705

	<i>1st Choice.</i>	<i>2d Choice.</i>	<i>1st and 2d Choice.</i>
Representative in Congress—Fourth District:			
William L. LaFollette.....	11,695	4,776	16,471
Henry W. Hale.....	3,672	6,067	9,739
Stephen J. Harrison.....	4,364	5,257	9,621
Will H. Fouts.....	2,826	3,118	5,944
Edward Parker	1,671	4,869	6,540

	<i>1st Choice.</i>	<i>2d Choice.</i>	<i>1st and 2d Choice.</i>
Representative in Congress—Fifth District:			
Alonzo M. Murphey.....	7,192	3,900	11,092
Tom Corkery	7,782	4,744	12,526
F. M. Goodwin.....	2,802	4,817	7,619
Charles C. Hart.....	3,707	5,135	8,842
Lloyd E. Gandy.....	2,003	3,438	5,441
John T. Mulligan.....	3,306	3,259	6,565
Guy B. Groff.....	1,022	2,470	3,492

	<i>1st Choice.</i>	<i>2d Choice.</i>	<i>1st and 2d Choice.</i>
United States Senator:			
William E. Humphrey.....	69,715	25,979	95,694
Miles Poindexter	77,962	28,816	106,778
Enoch A. Bryan.....	24,868	58,901	83,769
William Alvin Spalding.....	3,262	19,426	22,688
Schuyler Duryee	3,540	18,119	21,659
Mrs. John B. Allen.....	6,877	31,544	38,421

	<i>1st</i>	<i>2d</i>	<i>1st and 2d</i>
Governor:	<i>Choice.</i>	<i>Choice.</i>	<i>Choice.</i>
George A. Lee.....	23,097	25,458	48,553
J. E. Frost.....	5,850	14,397	20,047
Henry McBride	45,300	33,824	79,124
James McNeely	19,065	22,220	41,285
Roland H. Hartley	38,615	29,623	68,238
John G. Lewis.....	7,444	13,568	21,012
Robert T. Hodge.....	18,362	25,227	43,589
W. J. Sutton.....	29,400	21,989	51,389
Scattering	53	47	100

	<i>1st</i>	<i>2d</i>	<i>1st and 2d</i>
Lieutenant Governor:	<i>Choice.</i>	<i>Choice.</i>	<i>Choice.</i>
Louis F. Hart.....	77,979	31,937	109,936
Arthur W. Davis.....	42,643	47,855	89,998
George H. Baker.....	25,856	51,079	76,935
Loren H. Brewer.....	17,898	33,907	51,805
Scattering	3	31	34

Secretary of State:	
I. M. Howell.....	114,700
W. H. Ford.....	54,519
Scattering	1

	<i>1st</i>	<i>2d</i>	<i>1st and 2d</i>
State Treasurer:	<i>Choice.</i>	<i>Choice.</i>	<i>Choice.</i>
W. W. Sherman.....	63,724	37,719	101,443
Calvin J. Carr.....	47,221	36,758	83,977
W. J. Milroy.....	14,964	27,083	42,047
Harold H. Stewart.....	29,853	43,979	73,832
J. L. Glazebrook.....	7,791	16,926	24,717
Scattering	1	20	21

State Auditor:	
C. W. Clausen.....	111,650
W. E. Cromwell.....	63,640
Scattering	6

Attorney General:	
W. V. Tanner.....	158,887
Henry McLean	7
Scattering	13

Commissioner of Public Lands:	
Clark V. Savidge.....	159,577
Scattering	7

	<i>1st</i>	<i>2d</i>	<i>1st and 2d</i>
Superintendent of Public Instruction:	<i>Choice.</i>	<i>Choice.</i>	<i>Choice.</i>
Josephine Corliss Preston.....	77,456	30,674	108,130
M. E. Durham.....	50,282	43,383	93,665
Ruth C. Hoffman.....	31,514	63,837	95,351
DeFore Cramblitt	8,086	28,520	36,606
Scattering	18	48	66

State Insurance Commissioner:	
H. O. Fishback.....	116,769
Calvin E. Villau.....	47,984
Scattering	3

DEMOCRATIC TICKET.

United States Senator:	
Robert Bridges	9,628
George Turner	20,002
Scattering	177
Representative in Congress—First District:	
George F. Cotterill.....	5,719
Scattering	32
Representative in Congress—Second District:	
Frances C. Axtell.....	331
Lindley H. Hadley.....	16
Scattering	29
Representative in Congress—Third District:	
George P. Fishburne.....	5,081
Scattering	18
Representative in Congress—Fourth District:	
Charles W. Masterson.....	5,013
Scattering	11
Representative in Congress—Fifth District:	
C. C. Dill.....	7,040
Scattering	3
Governor:	
William Edwin Cass.....	3,794
Ernest Lister	28,620
Scattering	55
Lieutenant Governor:	
Thomas Lally	26,820
Scattering	20
Secretary of State:	
J. M. Tadlock.....	25,841
Scattering	34
State Treasurer:	
George J. Galvin.....	25,765
Scattering	36
State Auditor:	
Otto A. Case.....	2,572
Scattering	361
Attorney General:	
Henry Alberts McLean.....	2,506
Scattering	417
Commissioner of Public Lands:	
Robert E. McFarland.....	854
Scattering	371
Superintendent of Public Instruction:	
J. H. Morgan.....	24,550
Scattering	65
State Insurance Commissioner:	
J. H. Hemer.....	23,265
Scattering	25

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PROGRESSIVE TICKET.

United States Senator:	
Walter J. Thompson.....	21
Miles Polindexter	
Scattering	
Representative in Congress—First District:	
George Cotterill	
J. W. Bryan.....	
Scattering	
Representative in Congress—Second District:	
Mrs. Francis C. Artell.....	1
Scattering	
Representative in Congress—Third District:	
W. F. Ferguson.....	
Scattering	
Representative in Congress—Fourth District:	
Harry W. Hale.....	
Scattering	
Representative in Congress—Fifth District:	
John T. Mulligan.....	
Scattering	
Governor:	
James E. Bradford.....	31
McBride	
Scattering	
Lieutenant Governor:	
A. W. Davis.....	1
Louis F. Hart.....	
Scattering	
Secretary of State:	
Frank A. Rust.....	21
Scattering	
State Treasurer:	
George J. Galvin.....	1
Scattering	
State Auditor:	
Otto A. Case.....	1
W. E. Cromwell.....	
Scattering	
Attorney General:	
Henry Alberts McLean.....	31
Commissioner of Public Lands:	
Joe Smith	1
Clark Savidge	
Scattering	
Superintendent of Public Instruction:	
Joseph K. Hart.....	21
Josephine Preston	
Scattering	
State Insurance Commissioner:	
L. L. Snow.....	21
H. O. Flahback.....	

NON-PARTISAN JUDICIARY TICKET.

Judges of the Supreme Court—

Six-Year Term :

Emmett N. Parker.....	124,218	
Mark A. Fullerton.....	124,103	
George E. Morris.....	119,897	
Charles E. Claypool.....	87,186	
Edgar G. Mills.....	109,699	
Peter Husby	188	
Scattering	34	

Four-Year Term :

J. Stanley Webster.....	117,580	
Ellihu F. Barker.....	70,865	
Scattering	153	

JUDGES OF THE SUPERIOR COURT—JOINT JUDICIAL DISTRICTS.

Mason and Thurston Counties :

John R. Mitchell.....	Mason County	963	
	Thurston County	3,533	4,496
D. F. Wright.....	Mason County	1,047	
	Thurston County	3,296	4,343
Scattering	Mason County	4	
	Thurston County		4

Douglas and Grant Counties :

Sam B. Hill.....	Douglas County	1,500	
	Grant County	1,066	2,566
W. E. Southard.....	Douglas County	228	
	Grant County	828	1,056

Pacific and Wahkiakum Counties :

H. W. B. Hewen.....	Pacific County	1,481	
	Wahkiakum County	130	1,611
J. J. Brumbach.....	Pacific County	852	
	Wahkiakum County	98	950
Solomon Smith.....	Pacific County	409	
	Wahkiakum County	249	658
Edward H. Wright.....	Pacific County	807	
	Wahkiakum County	283	1,090

Benton, Franklin and Adams Counties :

Edward A. Davis.....	Benton County	225	
	Franklin County	786	
	Adams County	299	1,310
John Truax.....	Benton County	213	
	Franklin County	184	
	Adams County	1,079	1,476

G. W. Hamilton.....	Benton County	604	
	Franklin County	75	
	Adams County	47	72
M. M. Moulton.....	Benton County	1,098	
	Franklin County ..	96	
	Adams County	38	1,23
Stevens and Pend Oreille Counties:			
Daniel H. Carey.....	Stevens County	990	
	Pend Oreille County.....	720	1,71
F. Leo Grinstead.....	Stevens County	1,337	
	Pend Oreille County.....	383	1,72
J. A. Rochford.....	Stevens County	703	
	Pend Oreille County.....	279	98
Ferry and Okanogan Counties:			
E. K. Pendergast.....	Ferry County	621	
	Okanogan County	1,896	2,51
Charles H. Neal.....	Ferry County	617	
	Okanogan County	1,649	2,26
Klickitat, Skamania and Cowlitz Counties:			
William T. Darch.....	Klickitat County	1,599	
	Skamania County	528	
	Cowlitz County	1,426	3,55
B. L. Hubbell.....	Klickitat County	656	
	Skamania County	266	
	Cowlitz County	1,265	2,18
Jefferson, Island and Clallam Counties:			
John M. Ralston.....	Jefferson County	1,679	
	Island County	1,040	
	Clallam County	1,787	4,50
Scattering	Jefferson County		
	Island County	6	
	Clallam County	3	
Columbia, Garfield and Asotin Counties:			
Chester F. Miller.....	Columbia County	880	
	Garfield County	434	
	Asotin County	697	2,0
Scattering	Columbia County	5	
	Garfield County		
	Asotin County		
Skagit and San Juan Counties:			
Augustus Brawley	Skagit County	5,097	
	San Juan County.....	834	5,93

STATE SENATORS—JOINT SENATORIAL DISTRICTS.

First District—Okanogan, Ferry, Douglas and Grant Counties:

Republican Ticket—

W. A. Bollinger.....	Okanogan County	1,562	
	Ferry County	195	
	Douglas County	109	
	Grant County	1,012	2,878

M. B. Howe.....	Okanogan County	1,154	
	Ferry County	279	
	Douglas County	816	
	Grant County	372	2,621

Democratic Ticket—

J. W. Faulkner.....	Okanogan County	426	
	Ferry County	442	
	Douglas County	575	
	Grant County	272	1,115

Scattering	Okanogan County	-	
	Ferry County	-	
	Douglas County	-	
	Grant County	-	

Tenth District—Garfield, Columbia and Asotin Counties:

Republican Ticket—

Elgin V. Kuykendall.....	Garfield County	323	
	Columbia County	648	
	Asotin County	522	1,493

Democratic Ticket—

W. L. Howell.....	Garfield County	23	
	Columbia County	-	
	Asotin County	40	63

C. J. Thronson.....	Garfield County	-	
	Columbia County	98	
	Asotin County	-	98

Scattering	Garfield County	2	
	Columbia County	-	
	Asotin County	2	4

Eleventh District—Adams, Franklin and Walla Walla Counties:

Republican Ticket—

Elbert M. Chandler.....	Adams County	222	
	Franklin County	387	
	Walla Walla County.....	518	1,127

W. O. Miller.....	Adams County	563	
	Franklin County	180	
	Walla Walla County.....	292	1,035

O. T. Cornwell.....	Adams County	197	
	Franklin County	181	
	Walla Walla County.....	983	1,361

Democratic Ticket—

E. G. Cox.....	Adams County	290	
	Franklin County	221	
	Walla Walla County.....	398	909
Scattering	Adams County		
	Franklin County		
	Walla Walla County.....		

Thirteenth District—Chelan and Kittitas Counties:

Republican Ticket—

J. B. Adams.....	Chelan County	2,919	
	Kittitas County	1,874	4,793
Scattering	Chelan County	16	
	Kittitas County		16

Democratic Ticket—

J. B. Adams	Chelan County	18	
	Kittitas County	12	30
John Ferryman	Chelan County	57	
	Kittitas County	18	75
Scattering	Chelan County	1	
	Kittitas County	11	12

Fifteenth District—Yakima and Benton Counties:

Republican Ticket—

D. V. Morthland.....	Yakima County	5,031	
	Benton County	707	5,738
C. E. Lum.....	Yakima County	2,326	
	Benton County	854	3,180
Scattering	Yakima County	3	
	Benton County	0	3

Democratic Ticket—

H. C. Davis	Yakima County	730	
	Benton County	267	997
Scattering	Yakima County		
	Benton County		

Twenty-third District—Mason, Kitsap and Island Counties:

Republican Ticket—

Peter Iverson	Mason County	345	
	Kitsap County	2,367	
	Island County	642	3,354
R. W. Condon.....	Mason County	452	
	Kitsap County	2,298	
	Island County	530	3,280

Democratic Ticket—

Marcus M. Bowman.....	Mason County	251	
	Kitsap County	222	
	Island County	86	559

The Board having completed the canvass of the several joint senatorial districts, declared the nominations in the several districts in favor of the candidates who received the highest number of votes in each of the said districts as follows:

First District—Okanogan, Ferry, Grant and Douglas Counties:

Republican Ticket **W. A. Bolinger**
Democratic Ticket **J. W. Faulkner**

Tenth District—Garfield, Columbia and Asotin Counties:

Republican Ticket **Elgin V. Kuykendall**
Democratic Ticket **C. J. Thronson**

Eleventh District—Adams, Franklin and Walla Walla Counties:

Republican Ticket **C. T. Cornwell**
Democratic Ticket **E. G. Cox**

Thirteenth District—Chelan and Kittitas Counties:

Republican Ticket **J. B. Adams**
Democratic Ticket **John Ferryman**

Fifteenth District—Yakima and Benton Counties:

Republican Ticket **D. V. Morthland**
Democratic Ticket **H. C. Davis**

Twenty-Third District—Mason, Kitsap and Island Counties:

Republican Ticket **Peter Iverson**
Democratic Ticket **Marcus M. Bowman**

CERTIFICATION OF NOMINATIONS.

The Board, having canvassed the returns for the Republican ticket, wherein second choice ballots were necessary, find that the following candidates thereon have been nominated by 40 per cent. or more of the first choice votes for the respective offices set opposite their names:

United States Senator **Miles Poindexter**
Representative in Congress—Fourth District..... **Wm. L. LaFollette**
Lieutenant Governor..... **Louis F. Hart**
Superintendent of Public Instruction..... **Josephine Corliss Preston**

These names will appear in the regular certifications of nominations, but placed in their proper order on the Republican ticket.

After adding together the first and second choice votes for candidates for all offices where said votes were cast, and neither of the candidates for said particular offices had received the required 40 per cent. of first choice votes, declared the following results, and find that the persons hereinafter named have received the greatest number of votes and are entitled to the nominations for the respective offices as follows:

REPUBLICAN TICKET.

Representative in Congress—First District **John F. Miller**
Representative in Congress—Second District **Lindley H. Hadley**
Representative in Congress—Third District **Albert Johnson**
Representative in Congress—Fourth District **Wm. L. LaFollette**
Representative in Congress—Fifth District **Tom Corkery**

United States SenatorMiles Poindexter
 GovernorHenry McBride
 Lieutenant GovernorLouis F. Hart
 Secretary of StateI. M. Howell
 State TreasurerW. W. Sherman
 State Auditor.....C. W. Clausen
 Attorney GeneralW. V. Tanner
 Commissioner of Public LandsClark V. Savidge
 Superintendent of Public InstructionJosephine Corliss Preston
 State Insurance CommissionerH. O. Fishback

The Board, having canvassed the returns for the Democratic state ticket, find that the persons hereinafter named have received the greatest number of votes, and are entitled to the nomination for the respective offices as follows:

DEMOCRATIC TICKET.

Representative in Congress—First DistrictGeorge F. Cotterill
 Representative in Congress—Second District.....Frances C. Axtell
 Representative in Congress—Third District.....Geo. P. Fishburn
 Representative in Congress—Fourth District.....Chas. W. Masterson
 Representative in Congress—Fifth District.....C. C. Dill
 United States SenatorGeorge Turner
 GovernorErnest Lister
 Lieutenant GovernorThomas Lally
 Secretary of StateJ. M. Tadlock
 State TreasurerGeorge J. Galvin
 State AuditorOtto A. Case
 Attorney GeneralHenry Alberts McLean
 Commissioner of Public Lands.....Robert E. McFarland
 Superintendent of Public Instruction.....J. H. Morgan
 State Insurance Commissioner.....J. H. Hemer

The Board, having canvassed the returns for the Progressive state ticket, find that the persons hereinafter named have received the greatest number of votes, and are entitled to the nomination for the respective offices as follows:

PROGRESSIVE TICKET.

Representative in Congress—First DistrictGeorge F. Cotterill
 Representative in Congress—Second District.....Frances C. Axtell
 Representative in Congress—Third District.....W. F. Ferguson
 Representative in Congress—Fourth District.....Harry W. Hale
 Representative in Congress—Fifth DistrictJohn T. Mulligan
 United States Senator.....Walter J. Thompson
 GovernorJames E. Bradford
 Lieutenant GovernorA. W. Davis
 Secretary of State.....Frank A. Rust

State TreasurerGeorge A. Galvin
 State AuditorOtto A. Case
 Attorney GeneralHenry Alberts McLean
 Commissioner of Public Lands.....Joe Smith
 Superintendent of Public Instruction.....Joseph K. Hart
 State Insurance Commissioner.....L. L. Snow

The Board, having canvassed the returns for the Socialist ticket, find that the person hereinafter named has received the greatest number of votes, and is entitled to the nomination for the respective office as follows:

SOCIALIST TICKET.

The name of the candidate, the number of votes received by him and the office sought, is found to be as follows:

Representative in Congress—Second District:

R. J. Olinger..... 353

The following received nomination on the Socialist ticket:

Representative in Congress—2nd Dist.....R. J. Olinger

NOTE.—Other persons receiving votes on the Socialist ticket could not legally be considered by the Board, as the offices represented were for political units where the Socialists cast less than 10 per cent. of the total vote in the last preceding general election.

CERTIFICATION OF NOMINATION.

The Board having canvassed the returns for the Non-Partisan Joint Judicial Districts find that the following candidates have been nominated by 50 per cent. or more of the total vote cast for the respective judicial offices set opposite their names and they are entitled to appear on the ballot without opposition:

NON-PARTISAN JOINT JUDICIAL TICKET.

Judges of the Superior Court:

Thurston and Mason Counties (Two to be elected)John R. Mitchell
 Thurston and Mason Counties (Two to be elected).....D. F. Wright

Judge of the Superior Court:

Douglas and Grant Counties (One to be elected).....Sam B. Hill

Judge of the Superior Court:

Ferry and Okanogan Counties (One to be elected)E. K. Pendergast

Judge of the Superior Court:

Klickitat, Skamania and Cowlitz Counties (One to be elected)
William T. Darch

Judge of the Superior Court:

Jefferson, Island and Clallam Counties (One to be elected) ..John M. Balston

Judge of the Superior Court:

Columbia, Garfield and Asotin Counties (One the be elected)
Chester F. Miller

Judge of the Superior Court:

Skagit and San Juan Counties (One to be elected).....Augustus Brawley

The Board also finds that the following names have received the greatest number of votes and are entitled to the nomination for the respective offices as follows:

Judge of the Superior Court:

Pacific and Wahkiakum Counties (One to be elected).....H. W. B. Hewes

Pacific and Wahkiakum Counties (One to be elected)....Edward H. Wright

Judge of the Superior Court:

Benton, Franklin and Adams Counties (One to be elected).....John Truax

Benton, Franklin and Adams Counties (One to be elected)

.....Edward A. Davis

Judge of the Superior Court:

Stevens and Pend Oreille Counties (One to be elected)....F. Leo Grinstead

Stevens and Pend Oreille Counties (One to be elected).....Daniel H. Carey

The Board was called together for final action on Tuesday, October 17, 1916, and the following opinion written by the Honorable W. V. Tanner attorney general, concerning the Non-Partisan judicial vote relating to judges of the supreme court, was read, adopted, and by the Board, ordered incorporated in the minutes of said Board as follows:

October 16, 1916.

"Hon. I. M. Howell, Secretary of State, Olympia, Wash.

DEAR SIR: I am in receipt of your request for advice as to the names of candidates for the six year term for the supreme court which will be placed upon the judicial ballot.

From the returns of the county canvassing boards, it appears that the following persons received the number of votes set opposite their respective names:

Parker	124,219
Fullerton	124,108
Morris	119,890
Mills	109,701
Claypool	87,188
Peter Husby	175
Kasis Kranezanas	11
Alex Winston	7

The law provides that where any candidate or candidates receive a majority of all votes cast at the primary election for the office for which he or they are candidates, he or they shall have his or her names printed separately upon the general election ballot, and that the name of no opposing candidate shall be printed on the ballot in opposition to such candidates, but that blank spaces equalling the number of such majority candidates shall be left following each name or names.

As I construe the statute, a majority candidate is one who receives votes in excess of fifty per cent. of the votes cast for the office. The law makes no provision for a return of the number of votes cast for any particular judicial office. The returns do show, however, the total number of non-partisan judicial ballots cast in all of the counties of the state except Snohomish county; and since the number of votes cast for the six year term for the supreme court could not possibly exceed

the number of judicial ballots cast, I believe you are justified in using the return of ballots cast in those counties where other returns have not been made. In the case of Snohomish county and of King county, supplemental returns have been made under orders of court of the number of votes cast for the six year term, as follows:

King County	55,298
Snohomish County	10,796

Adding to these the numbers of judicial ballots cast in all other counties of the state, to-wit: 195,365, we have a total of not to exceed 235,459 votes cast for the supreme court; and since Parker, Fullerton and Morris have received the votes of more than fifty per cent. of those voting for the office, you are advised that the names of these three candidates should be placed upon the official ballot without the name of any candidate printed in opposition thereto, in accordance with the provisions of section 4842, Remington's 1915 Code.

Yours respectfully,

(Signed) W. V. TANNER,
Attorney General."

Therefore upon the face of the returns and in conformity with the foregoing opinion the Board finds the following nominations to have been made by a majority vote and entitled to places on the ballot without opposition.

Six-Year Term:

Emmett N. Parker
Mark A. Fullerton.
George E. Morris

Four-Year Term:

J. Stanley Webster

It is further certified that the foregoing pages numbered from four to seventy-seven inclusive, show the vote of each candidate of each political party, for each office canvassed by said state Canvassing Board, also the vote of each candidate for the office of supreme court judge of the State of Washington, also the vote for each candidate for the office of superior court judge, of the State of Washington in each of the superior court judicial districts, extending beyond the limits of a single county, also the joint districts for the office of state senator comprising more than one county; and each of the pages above referred to have been initialed by the undersigned by way of permanent identification, and are the complete record and minutes of said canvass.

There being no further business to come before the Board on motion the Board adjourned *sine die*.

IN WITNESS WHEREOF the undersigned as said State Canvassing Board have hereunto set their hands this seventeenth day of October, 1916.

(Signed) I. M. HOWELL, *Secretary of State*.
EDWARD MEATH, *State Treasurer*.
C. W. CLAUSEN, *State Auditor*.

ABSTRACT OF VOTES
POLLED IN THE
STATE OF WASHINGTON
AT THE
GENERAL ELECTION
HELD
NOVEMBER 7, 1916

FOR AND AGAINST

**A Certain Proposed Amendment to the State Constitution
and Certain Initiative and Referendum Measures,**

ALSO FOR

**Presidential Electors, United States Senator, Representatives
in Congress, Supreme Court Judges, State Officers,
Joint State Senators and Superior Court
Judges Whose Districts Com-
prise More Than One
County.**

ABSTRACT OF VOTES, GENERAL ELECTION, 1916.

COUNTIES	AMENDMENT TO CONSTITUTION			PROPOSED INITIATIVE AND REFERENDUM MEASURES			
	Total Number of Votes Cast in Each County	For Constitutional Amendment	Against Constitutional Amendment	For Initiative Measure No. 24	Against Initiative Measure No. 24	For Referendum Measure No. 3	Against Referendum Measure No. 3
1 Adams	2,808	575	1,406				
2 Asotin	2,507	588	908				
3 Benton	2,821	711	1,591				
4 Chelan	6,006	1,740	2,632	1,			
5 Chittam	3,504	577	1,200	1,			
6 Clarke	9,261	2,765	2,973	2,			
7 Columbia	2,519	359	1,284				
8 Cowlitz	2,950	856	1,717				
9 Douglas	3,322	814	1,863				
10 Ferry	1,791	446	698				
11 Franklin	1,968	485	901				
12 Garfield	1,664	335	698				
13 Grant	2,185	748	1,333				
14 Grays Harbor	11,723	2,326	6,002	2,			
15 Island	1,902	355	957				
16 Jefferson	1,047	647	711				
17 King	20,232	40,963	20,232	2,			
18 Kitsap	7,168	1,607	3,485	2,			
19 Kittitas	5,541	1,324	2,842	1,			
20 Klickitat	3,413	791	1,262	7,			
21 Lewis	10,875	2,321	4,656	2,			
22 Lincoln	5,586	1,082	2,833				
23 Mason	1,793	395	752				
24 Okanogan	5,590	1,227	2,853				
25 Pacific	4,597	1,301	2,001	1,			
26 Pend Oreille	2,218	466	1,075				
27 Pierce	20,880	18,456	11,111	11,			
28 San Juan	1,455	384	640				
29 Skagit	10,624	1,786	6,374	1,			
30 Skamania	1,012	250	358				
31 Snohomish	20,732	4,324	9,705	4,			
32 Spokane	43,871	11,327	22,922	3,			
33 Stevens	6,321	1,336	3,000	1,			
34 Thurston	6,829	1,690	3,122	1,			
35 Wahkiakum	967	294	317				
36 Walla Walla	9,515	1,765	5,010	1,			
37 Whatcom	16,100	3,455	8,660	3,			
38 Whitman	11,629	2,323	5,333	1,			
39 Yakima	15,069	2,877	7,307	2,			
Totals.....	202,709	56,968	130,179	28,643	245,399	63,117	196,303

COUNTIES		PRESIDENTIAL ELECTORS Republican Party						
		Warren H. Lewis	Luther P. Weedlin	F. E. Beard	Geo. E. Finley	J. Henry Smith	Richard M. Buttle	J. A. Perkins
1	Adams	1,237	1,230	1,233	1,237	1,237	1,236	1,239
2	Asotin	1,004	991	991	992	991	988	988
3	Benton	1,460	1,408	1,401	1,415	1,400	1,398	1,398
4	Chelan	3,011	2,997	3,011	3,008	3,007	3,004	3,000
5	Clallam	1,475	1,458	1,449	1,453	1,453	1,432	1,430
6	Clarke	4,419	4,409	4,414	4,418	4,412	4,407	4,411
7	Columbia	1,148	1,141	1,147	1,142	1,145	1,143	1,148
8	Cowlitz	2,118	2,108	2,107	2,107	2,107	2,108	2,105
9	Douglas	1,125	1,122	1,123	1,125	1,123	1,125	1,127
10	Ferry	581	581	580	580	579	579	580
11	Franklin	671	672	672	671	672	672	670
12	Garfield	845	842	842	842	843	843	843
13	Grant	1,205	1,204	1,206	1,207	1,205	1,205	1,206
14	Grays Harbor	5,024	4,969	4,967	4,964	4,964	4,964	4,961
15	Island	804	805	802	803	801	801	801
16	Jefferson	1,094	1,091	1,091	1,090	1,090	1,087	1,086
17	King	38,959	38,718	38,646	38,634	38,719	38,606	38,618
18	Kitsap	2,638	2,628	2,627	2,631	2,633	2,625	2,627
19	Kittitas	2,310	2,289	2,284	2,287	2,280	2,279	2,276
20	Klickitat	1,570	1,551	1,552	1,553	1,547	1,544	1,547
21	Lewis	5,186	5,163	5,159	5,147	5,161	5,158	5,151
22	Lincoln	2,356	2,354	2,351	2,353	2,357	2,350	2,355
23	Mason	764	758	759	758	759	758	759
24	Okanogan	1,896	1,877	1,873	1,876	1,895	1,870	1,879
25	Pacific	2,638	2,659	2,659	2,663	2,660	2,652	2,658
26	Pend Oreille	916	914	913	917	914	916	914
27	Pierce	16,780	16,732	16,729	16,735	16,745	16,723	16,717
28	San Juan	591	589	586	583	587	584	589
29	Skagit	4,142	4,118	4,120	4,114	4,118	4,119	4,111
30	Skamania	489	474	485	486	488	484	484
31	Snohomish	8,625	8,598	8,607	8,608	8,611	8,598	8,595
32	Spokane	19,503	19,464	19,471	19,480	19,465	19,467	19,474
33	Stevens	2,684	2,676	2,675	2,674	2,677	2,676	2,675
34	Thurston	3,223	3,206	3,210	3,209	3,210	3,206	3,203
35	Wahkiakum	490	488	488	489	490	489	488
36	Walla Walla	4,429	4,401	4,400	4,401	4,401	4,400	4,392
37	Whatcom	7,632	7,592	7,594	7,602	7,597	7,579	7,580
38	Whitman	4,933	4,923	4,925	4,926	4,923	4,923	4,926
39	Yakima	7,188	7,151	7,149	7,152	7,147	7,138	7,148
Totals.....		167,208	166,340	166,298	166,375	166,406	166,143	166,971

<p>PRESIDENTIAL ELECTORS Democratic Party</p>
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* Deceased. Edwin M. Connor substituted before election.

COUNTIES		PRESIDENTIAL ELECTORS						
		Prohibition Party						
		Salome R. Lippy	Walter F. McDowell	John Anderson	L. Stanton	F. B. Orary	R. M. Shoemaker	O. O. Gridley
1	Adams	21	21	21	21	21	21	21
2	Asotin	80	80	79	79	79	79	78
3	Benton	53	53	51	51	51	51	52
4	Chelan	151	151	151	150	150	150	150
5	Clallam	19	19	19	19	20	20	19
6	Clarke	199	199	201	199	199	200	208
7	Columbia	25	25	25	25	25	25	25
8	Cowlitz	57	57	59	58	58	59	58
9	Douglas	28	28	30	28	28	28	29
10	Ferry	5	5	5	5	5	5	4
11	Franklin	23	23	24	23	23	23	23
12	Garfield	11	12	12	12	12	12	12
13	Grant	38	38	38	38	38	38	38
14	Grays Harbor	96	96	96	95	96	95	96
15	Island	16	15	16	15	15	15	15
16	Jefferson	22	22	22	22	22	22	22
17	King	922	904	901	894	896	899	881
18	Kitsap	94	95	98	98	94	95	96
19	Kittitas	93	90	92	91	98	91	90
20	Klickitat	23	24	25	23	22	25	23
21	Lewis	239	239	241	239	239	239	239
22	Lincoln	62	63	61	64	62	63	62
23	Mason	16	16	16	16	16	16	16
24	Okanogan	33	34	33	33	34	33	33
25	Pacific	30	30	30	33	29	29	29
26	Pend Oreille	9	10	10	29	29	10	9
27	Pierce	1,059	1,058	1,067	1,059	1,053	1,060	1,051
28	San Juan	13	13	13	13	13	13	13
29	Skagit	256	252	252	253	252	254	254
30	Skamania	5	5	5	5	5	5	5
31	Snohomish	606	609	606	606	606	606	604
32	Spokane	877	878	875	869	870	869	872
33	Stevens	104	104	104	104	105	104	104
34	Thurston	231	235	231	231	231	231	230
35	Wahkiakum	7	7	8	7	7	7	7
36	Walla Walla	120	118	119	119	119	119	119
37	Whatcom	465	460	463	461	460	461	460
38	Whitman	189	186	186	186	185	186	184
39	Yakima	575	570	569	567	568	569	566
Totals.....		6,968	6,840	6,838	6,814	6,812	6,819	6,790

COUNTIES		PRESIDENTIAL ELECTORS						
		Socialist Party						
		Marie Nielsen	Laura M. House	Helen Camp	Bertha Zletz	Allen Brooks	Bonner Bartlett	Kate Sutton
1	Adams	112	112	113	113	112	112	111
2	Asotin	117	117	117	117	117	117	116
3	Benton	342	313	314	313	313	312	315
4	Obelan	405	401	400	399	399	399	398
5	Olallam	418	414	414	414	415	413	415
6	Clarke	677	675	675	676	675	675	675
7	Columbia	108	108	108	108	108	108	108
8	Cowlitz	378	377	378	377	378	377	379
9	Douglas	148	148	148	148	148	148	148
10	Ferry	221	221	221	221	221	221	220
11	Franklin	109	109	109	109	109	108	108
12	Garfield	82	81	82	82	82	80	81
13	Grant	221	221	222	222	222	222	223
14	Grays Harbor	1,209	1,204	1,204	1,201	1,202	1,203	1,202
15	Island	170	169	169	169	171	169	169
16	Jefferson	134	131	130	132	131	131	132
17	King	3,193	3,072	3,057	3,052	3,067	3,048	3,042
18	Kitsap	751	720	718	717	716	717	717
19	Kittitas	262	257	259	258	257	259	258
20	Klickitat	186	187	189	189	188	187	187
21	Lewis	345	344	344	342	343	344	343
22	Lincoln	221	222	221	221	221	221	221
23	Mason	162	162	162	162	162	162	162
24	Okanogan	474	473	473	472	472	474	473
25	Pacific	257	254	254	254	253	255	253
26	Pend Oreille	111	111	111	112	112	112	112
27	Pierce	1,894	1,885	1,883	1,861	1,885	1,883	1,883
28	San Juan	122	117	117	117	118	118	117
29	Skagit	951	939	941	940	942	938	939
30	Skamania	34	34	34	34	34	34	33
31	Snohomish	2,543	2,526	2,524	2,522	2,529	2,521	2,530
32	Spokane	1,321	1,315	1,316	1,313	1,315	1,315	1,319
33	Stevens	673	675	676	675	676	675	676
34	Thurston	624	618	618	621	618	617	619
35	Wahkiakum	103	103	103	103	103	103	103
36	Walla Walla	218	217	217	217	217	217	208
37	Whatcom	2,075	2,064	2,068	2,064	2,065	2,067	2,069
38	Whitman	239	238	238	238	238	239	239
39	Yakima	735	731	733	731	735	731	732
Totals		22,300	22,515	22,510	22,486	22,513	22,482	22,490

COUNTIES		PRESIDENTIAL ELECTORS						
		Socialist Labor Party						
		Gotfried Gustafson	Jerry E. Sullivan	John O. Schafer	Leslie H. Sawyer	Arne Hage	Fred Kurtsman	Andrew P. Anderson
1	Adams	9	8	8	8	8	8	8
2	Asotin	1	1	1	1	1	1	2
3	Benton	8	5	5	5	5	5	5
4	Chelan	7	8	7	7	7	7	7
5	Clallam	10	9	9	10	9	10	9
6	Clarke	10	9	10	9	10	8	10
7	Columbia	2	2	2	2	2	2	2
8	Cowlitz	4	4	4	4	4	4	5
9	Douglas	2	2	2	2	2	2	2
10	Ferry	3	3	3	3	3	3	4
11	Franklin	3	3	3	3	4	4	4
12	Garfield	1	1	1	1	1	1	1
13	Grant	3	3	3	3	3	3	3
14	Grays Harbor	15	17	16	17	16	15	16
15	Island	1	1	1	1	2	1	1
16	Jefferson	272	251	254	249	249	248	244
17	King	12	11	11	11	11	11	11
18	Kitsap	7	6	6	8	6	7	6
19	Kittitas	2	2	2	2	2	2	2
20	Klickitat	13	10	10	10	10	10	10
21	Lewis	5	6	6	5	5	5	5
22	Lincoln	3	3	3	3	3	3	3
23	Mason	7	7	8	7	7	7	8
24	Okanogan	6	6	5	6	5	5	5
25	Pacific	4	5	4	4	4	4	5
26	Pend Oreille	97	102	100	97	99	99	100
27	Pierce	25	25	25	25	25	25	27
28	San Juan	43	45	42	42	41	41	42
29	Skagit	80	82	79	79	79	77	81
30	Skamania	6	7	6	6	8	6	8
31	Snohomish	12	12	12	12	12	12	12
32	Spokane	1	1	2	1	1	1	1
33	Stevens	4	2	2	2	2	2	2
34	Thurston	41	42	41	40	41	40	41
35	Wahkiakum	5	6	5	5	5	5	6
36	Walla Walla	6	4	4	5	4	5	3
37	Whatcom							
38	Whitman							
39	Yakima							
	Totals.....	780	711	701	697	699	690	701

COUNTIES		GOVERNOR. (Concluded)			LIEUTENANT GOVERNOR			
		Proh.	Soc.	Soc. Lab.	Rep.	Dem.	Proh.	Soc.
		A. B. L. Gellerman	L. E. Katterfeld	James E. Riordan	Louis F. Hart	Thomas Lally	Nettie Hollenbeck	Katherine H. Hodgins
1	Adams	6	98	1	1,226	1,177	9	109
2	Asotin	86	109	2	1,013	899	49	114
3	Benton	27	278	5	1,555	1,098	42	297
4	Chelan	94	848	6	3,238	2,218	135	395
5	Clallam	11	389	10	1,577	971	19	399
6	Clarke	149	663	3	4,888	2,589	169	669
7	Columbia	29	94	.....	1,176	1,076	23	162
8	Cowlitz	40	347	4	2,146	1,057	73	359
9	Douglas	23	121	3	1,199	1,741	32	140
10	Ferry	5	197	2	627	791	5	208
11	Franklin	18	98	3	715	962	20	106
12	Garfield	4	81	1	808	648	10	33
13	Grant	31	214	1	1,848	1,280	42	228
14	Grays Harbor	74	1,272	17	5,544	3,994	91	1,314
15	Island	13	149	1	812	728	22	168
16	Jefferson	10	125	1	1,206	599	25	194
17	King	416	2,721	229	40,711	39,532	625	2,988
18	Kitsap	62	702	17	3,090	2,378	109	758
19	Kittitas	68	248	7	2,579	2,064	63	261
20	Klickitat	27	168	4	1,676	1,055	31	179
21	Lewis	145	792	7	5,302	3,769	191	831
22	Lincoln	29	199	4	2,422	2,542	46	196
23	Mason	8	151	22	797	640	14	132
24	Okanogan	21	430	7	2,189	2,384	34	459
25	Pacific	31	251	3	2,744	1,179	47	239
26	Pend Oreille	11	94	2	999	985	12	107
27	Pierce	543	1,730	94	19,010	15,744	760	1,889
28	San Juan	7	109	.....	735	400	17	118
29	Skagit	144	943	20	4,499	3,852	289	1,008
30	Skamania	7	42	.....	507	809	8	37
31	Snohomish	201	2,616	33	8,844	6,870	422	2,804
32	Spokane	324	1,134	57	20,549	19,632	443	1,198
33	Stevens	54	645	3	2,701	2,872	88	702
34	Thurston	145	613	30	3,394	2,180	179	665
35	Wahkiakum	3	102	2	504	237	2	101
36	Walla Walla	34	150	2	4,585	4,008	68	187
37	Whatecom	312	1,838	82	7,737	4,513	472	1,967
38	Whitman	105	208	3	5,296	4,902	136	231
39	Yakima	252	707	6	7,408	5,436	422	737
Totals.....		3,514	21,117	623	177,269	149,196	5,235	22,506

COUNTIES		SECRETARY OF STATE					STATE TREASURER			
		Rep.	Dem.	Prog.	Proh.	Soc.	Rep.	Dem.	Proh.	Soc.
		L. M. Howell	J. M. Tadlock	Frank A. Rust	W. J. Warren	James Grant	W. W. Sherman	George J. Galvin	Mary M. Wade	Mary Stevenson
1	Adams	1,408	988	4	12	100	1,222	1,088	15	98
2	Anotin	1,060	880	8	51	116	1,060	831	45	116
3	Benton	1,088	974	9	43	299	1,088	945	49	210
4	Chelan	3,353	2,089	18	160	807	3,353	2,009	171	415
5	Clallam	1,667	865	23	18	407	1,622	861	55	416
6	Clarke	5,009	2,441	14	168	608	4,916	2,471	201	699
7	Columbia	1,280	989	2	26	101	1,281	998	25	102
8	Cowlitz	2,211	983	9	56	379	2,221	986	71	378
9	Douglas	1,822	1,511	10	30	188	1,281	1,571	36	189
10	Ferry	671	787	4	5	209	686	780	7	212
11	Franklin	810	886	7	21	101	823	816	21	106
12	Garfield	925	658	1	9	32	980	608	9	35
13	Grant	1,417	1,195	24	42	227	1,365	1,224	49	245
14	Grays Harbor ..	5,719	3,789	51	97	1,306	5,715	3,772	149	1,317
15	Island	804	640	6	25	172	880	608	65	170
16	Jefferson	1,258	506	9	13	185	1,236	507	32	183
17	King	35,555	25,748	1,149	555	2,992	42,943	34,411	843	3,125
18	Kitsap	3,138	2,325	39	58	766	3,272	1,999	187	301
19	Kittitas	2,780	1,871	9	64	271	2,738	1,891	60	265
20	Klickitat	1,759	989	12	28	174	1,721	978	32	179
21	Lewis	5,608	3,458	25	180	843	4,974	4,227	190	886
22	Lincoln	2,712	2,270	8	40	204	2,516	2,355	82	207
23	Mason	854	579	4	14	155	839	596	20	161
24	Okanogan	2,825	2,254	15	32	455	2,229	2,249	45	431
25	Pacific	2,300	1,081	7	31	258	2,838	1,008	58	259
26	Pend Oreille ..	1,019	905	6	11	108	1,024	907	17	108
27	Pierce	19,980	14,602	37	686	1,300	19,946	14,529	689	1,378
28	San Juan	755	894	5	14	117	749	873	23	120
29	Shagit	4,038	3,685	55	251	990	4,733	3,345	372	1,053
30	Shamania	527	238	4	7	32	534	233	7	35
31	Snohomish	9,116	6,608	57	406	2,818	9,135	6,187	539	2,830
32	Spokane	22,682	17,082	45	450	1,219	21,899	17,515	507	1,246
33	Stevens	2,307	2,714	17	32	708	2,835	2,697	90	717
34	Thurston	3,452	1,982	69	180	676	3,604	1,805	211	674
35	Wahkiakum	582	195	2	4	104	542	197	3	105
36	Walla Walla	5,241	3,247	9	58	194	5,009	3,300	32	194
37	Whatecom	7,983	4,208	110	420	1,975	8,041	4,000	685	1,996
38	Whitman	5,676	4,568	13	129	236	5,444	4,699	140	235
39	Yakima	3,280	4,371	51	411	742	3,491	4,288	455	757
Totals.....		187,851	136,587	1,975	4,908	22,685	186,304	138,787	6,273	23,150

COUNTIES		STATE AUDITOR				ATTORNEY GENERAL		
		Rep.	Dem.	Proh.	Soc.	Rep.	Dem.	Soc.
		O. W. Clausen	Otto A. Case	N. A. Thompson	E. E. Owsley	W. V. Tanner	Henry Alberts McLean	M. J. Schwartz
1	Adams	1,284	1,184	14	97	1,325	1,068	100
2	Asotin	1,021	888	45	113	1,021	841	114
3	Benton	1,558	1,053	44	309	1,641	979	315
4	Chelan	3,342	2,062	132	401	3,335	2,086	388
5	Clallam	1,640	919	16	411	1,606	894	413
6	Clarke	4,914	2,469	178	689	4,902	2,522	686
7	Columbia	1,222	1,024	21	102	1,217	1,020	102
8	Cowlitz	2,225	963	58	375	2,215	1,008	377
9	Douglas	1,238	1,698	32	131	1,265	1,696	131
10	Ferry	616	778	5	206	632	760	211
11	Franklin	755	872	18	108	805	829	98
12	Garfield	839	625	13	83	843	600	35
13	Grant	1,350	1,230	41	240	1,344	1,243	242
14	Grays Harbor	5,642	3,842	97	1,313	5,612	3,911	1,317
15	Island	849	702	25	164	872	652	159
16	Jefferson	1,222	530	16	134	1,224	526	136
17	King	39,527	40,867	601	2,985	41,689	36,721	3,106
18	Kitsap	3,291	2,349	74	750	3,146	2,232	791
19	Kittitas	2,575	2,088	60	265	2,583	2,016	265
20	Klickitat	1,705	980	23	132	1,732	971	133
21	Lewis	5,357	3,577	134	839	5,381	3,689	831
22	Lincoln	2,533	2,340	45	202	2,561	2,347	201
23	Mason	838	580	14	162	840	569	167
24	Okanogan	2,223	2,298	30	464	2,251	2,276	477
25	Pacific	2,768	1,071	31	263	2,814	1,067	266
26	Pend Oreille	1,009	910	12	102	1,010	902	102
27	Pierce	19,473	14,739	602	1,881	19,635	14,987	1,897
28	San Juan	724	430	14	119	723	400	113
29	Skagit	4,758	3,508	229	1,025	4,630	3,308	1,057
30	Skamania	531	233	9	34	515	291	33
31	Snohomish	9,067	6,586	430	2,329	9,163	6,565	2,349
32	Spokane	22,305	17,281	464	1,250	21,940	17,739	1,249
33	Stevens	2,813	2,723	87	715	2,843	2,683	732
34	Thurston	3,584	1,829	247	666	3,529	1,892	663
35	Wahkiakum	543	197	3	101	535	203	102
36	Walla Walla	5,123	3,325	57	183	4,833	3,482	194
37	Whatcom	7,983	4,272	433	1,977	8,065	4,167	2,136
38	Whitman	5,343	4,734	136	231	5,294	4,809	233
39	Yakima	3,192	4,509	425	733	3,331	4,564	761
Totals.....		181,953	142,265	5,080	22,798	183,977	139,065	23,297

COUNTIES	SUPERINTENDENT OF PUBLIC INSTRUCTION			COMMISSIONER OF PUBLIC LANDS			
	Rep.	Dem.	Soc.	Rep.	Dem.	Prog.	Soc.
	Josephine Corlies Preston	J. H. Morgan	Francis O. Sylvester	Clark V. Savidge	Robert E. McFarland	Joe [unclear]	Frank Coert
1 Adams	1,214	1,202	96	1,429	986	8	96
2 Asotin	1,122	812	131	1,037	817	4	114
3 Benton	1,677	1,044	312	1,743	889	11	318
4 Chelan	2,515	2,066	408	2,202	2,009	18	404
5 Clallam	1,741	876	418	1,673	804	13	418
6 Clarke	4,884	2,718	704	4,260	2,434	24	696
7 Columbia	1,289	1,034	97	1,244	1,000	3	100
8 Cowlitz	2,109	1,127	377	2,270	983	9	372
9 Douglas	1,850	1,641	132	1,202	1,583	6	134
10 Ferry	687	765	208	649	754	2	213
11 Franklin	907	797	108	925	856	7	101
12 Garfield	875	608	29	861	587	1	34
13 Grant	1,422	1,246	242	1,431	1,170	23	239
14 Grays Harbor	6,514	4,133	1,306	5,829	3,633	32	1,313
15 Island	1,008	564	162	925	594	12	160
16 Jefferson	1,305	617	129	1,207	487	5	139
17 King	44,920	34,455	2,225	42,017	33,963	1,286	3,144
18 Kitsap	2,789	1,857	796	2,361	1,915	31	796
19 Kittitas	1,896	2,957	243	2,784	1,829	27	251
20 Klickitat	1,739	1,056	177	1,760	927	11	180
21 Lewis	5,460	3,756	897	5,519	3,450	27	849
22 Lincoln	2,638	2,321	198	2,654	2,269	6	208
23 Mason	757	596	163	970	509	2	163
24 Okanogan	2,690	1,942	460	2,439	2,069	5	475
25 Pacific	2,796	1,138	264	2,923	963	4	266
26 Pend Oreille	1,076	873	100	1,032	889	6	98
27 Pierce	19,468	15,402	1,329	19,226	15,085	36	1,321
28 San Juan	812	373	119	795	340	4	121
29 Skagit	5,204	3,213	1,076	4,990	3,143	43	1,053
30 Shastania	528	236	86	536	268	5	35
31 Snohomish	9,500	6,325	2,855	9,323	6,152	74	2,823
32 Spokane	23,809	16,612	1,213	20,907	18,566	67	1,251
33 Stevens	3,086	2,065	696	2,963	2,603	16	706
34 Thurston	2,837	2,813	1,090	2,969	1,519	22	670
35 Wahkiakum	556	202	98	544	188	2	101
36 Walla Walla	5,313	2,996	180	5,039	3,311	13	190
37 Whatcom	3,268	4,247	2,068	3,404	3,674	124	2,021
38 Whitman	5,645	4,772	238	5,507	4,608	43	233
39 Yakima	8,450	4,781	746	8,516	4,313	47	759
Totals.....	132,236	126,458	23,669	137,269	121,975	2,111	23,207

COUNTIES		STATE INSURANCE COMMISSIONER				REPRESENTATIVE IN CONGRESS First District		
		Rep.	Dem.	Prog.	Soc.	Rep.	Dem.	Soc.
		H. O. Fishback	J. H. Hemer	L. L. Snow	F. J. McKay	John F. Miller	George F. Cotterill	E. B. Tryon
1	Adams	1,359	1,004	8	95			
2	Asotin	1,009	826	5	114			
3	Benton	1,682	894	15	310			
4	Chelan	3,898	1,901	32	404			
5	Clallam	1,636	800	8	409			
6	Clarke	4,970	2,865	32	686			
7	Columbia	1,233	1,004	8	99			
8	Cowlitz	2,161	1,027	17	373			
9	Douglas	1,257	1,655	7	137			
10	Ferry	615	747	11	202			
11	Franklin	826	791	6	104			
12	Garfield	848	581	2	31			
13	Grant	1,836	1,207	23	248			
14	Grays Harbor	5,766	3,592	25	1,323			
15	Island	928	579	14	160			
16	Jefferson	1,231	473	3	142			
17	King	42,995	38,010	931	3,200	35,714	32,964	1,931
18	Kitsap	3,879	1,843	51	313	3,055	2,754	703
19	Kittitas	2,707	1,832	12	249			
20	Klickitat	1,684	946	17	189			
21	Lewis	5,629	3,426	46	867			
22	Lincoln	2,600	2,255	9	203			
23	Mason	846	527	22	163			
24	Okanogan	2,254	2,146	40	434			
25	Pacific	2,868	975	11	267			
26	Pend Oreille	1,016	868	13	100			
27	Pierce	21,008	13,158	123	1,916			
28	San Juan	744	372	9	121			
29	Skagit	4,915	3,170	72	1,076			
30	Skamania	532	264	7	34			
31	Snohomish	9,376	5,911	73	2,391			
32	Spokane	22,435	16,969	92	1,233			
33	Stevens	2,791	2,659	39	713			
34	Thurston	3,673	1,580	210	633			
35	Wahkiakum	549	181	2	103			
36	Walla Walla	5,136	3,133	3	193			
37	Whatcom	3,103	3,637	207	2,045			
38	Whitman	5,551	4,533	16	232			
39	Yakima	3,521	4,193	75	750			
Totals.....		139,645	127,079	2,356	23,354	33,769	35,713	2,634

COUNTIES		REPRESENTATIVE IN CONGRESS Second District			REPRESENTATIVE IN CONGRESS Third District			
		Rep.	Dem.	Soc.	Rep.	Dem.	Prog.	Soc.
		Lindley H. Hadley	Mrs. Frances C. Artell	R. J. Olinger	Albert Johnson	George P. Fishburne	Geo. Cotterill	W. F. Ferguson
1	Adams							
2	Asotin							
3	Benton							
4	Chelan							
5	Clallam	1,585	1,062	408				
6	Clarke				5,126	2,502		667
7	Columbia							
8	Cowlitz				2,343	941		864
9	Douglas							
10	Ferry							
11	Franklin							
12	Garfield							
13	Grant							
14	Grays Harbor				6,069	3,719		1,226
15	Island	796	812	158				
16	Jefferson	1,152	650	181				
17	King	6,979	7,686	815				
18	Kitsap							
19	Kittitas							
20	Klickitat							
21	Lewis				5,706	3,467		727
22	Lincoln							
23	Mason				904	542		157
24	Okanogan							
25	Pacific				3,054	1,017		250
26	Pend Oreille							
27	Pierce				19,356	15,494		1,562
28	San Juan	665	565	106				
29	Skagit	4,235	4,527	1,029				
30	Skamania				608	260		82
31	Snohomish	8,459	7,171	3,075				
32	Spokane							
33	Stevens							
34	Thurston				3,604	1,843	2	563
35	Wahkiakum				630	164		94
36	Walla Walla							
37	Whatcom	7,784	5,662	1,815				
38	Whitman							
39	Yakima							
Totals.....		31,655	23,075	7,537	47,415	29,949	2	5,662

COUNTIES		REPRESENTATIVE IN CONGRESS Fourth District			REPRESENTATIVE IN CONGRESS Fifth District		
		Rep.	Dem.	Soc.	Rep.	Dem.	Soc.
		William L. LaFollette	Chas. W. Masterson	Walter Price	Tom Corkery	C. O. Dill	John M. Powers
1	Adams	1,397	1,075	98	.....	.....	.....
2	Asotin	1,142	819	118	.....	.....	.....
3	Benton	1,812	917	813	.....	.....	.....
4	Chelan .....	.....	.....	.....	2,850	2,988	339
5	Clallam .....	.....	.....	.....	.....	.....	.....
6	Clarke .....	.....	.....	.....	.....	.....	.....
7	Columbia	1,321	944	104	.....	.....	.....
8	Cowlitz .....	.....	.....	.....	.....	.....	.....
9	Douglas .....	.....	.....	.....	1,106	1,956	118
10	Ferry .....	.....	.....	.....	473	1,086	169
11	Franklin	928	786	108	.....	.....	.....
12	Garfield	927	567	33	.....	.....	.....
13	Grant	1,609	1,058	284	.....	.....	.....
14	Grays Harbor .....	.....	.....	.....	.....	.....	.....
15	Island .....	.....	.....	.....	.....	.....	.....
16	Jefferson .....	.....	.....	.....	.....	.....	.....
17	King .....	.....	.....	.....	.....	.....	.....
18	Kitsap .....	.....	.....	.....	.....	.....	.....
19	Kittitas	2,951	1,754	257	.....	.....	.....
20	Klickitat	1,899	906	178	.....	.....	.....
21	Lewis .....	.....	.....	.....	.....	.....	.....
22	Lincoln .....	.....	.....	.....	2,297	2,852	192
23	Mason .....	.....	.....	.....	.....	.....	.....
24	Okanogan .....	.....	.....	.....	1,769	3,195	390
25	Pacific .....	.....	.....	.....	.....	.....	.....
26	Pend Oreille .....	.....	.....	.....	872	1,180	88
27	Pierce .....	.....	.....	.....	.....	.....	.....
28	San Juan .....	.....	.....	.....	.....	.....	.....
29	Skagit .....	.....	.....	.....	.....	.....	.....
30	Skamania .....	.....	.....	.....	.....	.....	.....
31	Snohomish .....	.....	.....	.....	.....	.....	.....
32	Spokane .....	.....	.....	.....	20,427	20,736	1,043
33	Stevens .....	.....	.....	.....	2,504	3,486	613
34	Thurston .....	.....	.....	.....	.....	.....	.....
35	Wahkiakum .....	.....	.....	.....	.....	.....	.....
36	Walla Walla	5,019	3,811	185	.....	.....	.....
37	Whatcom .....	.....	.....	.....	.....	.....	.....
38	Whitman	6,064	4,399	227	.....	.....	.....
39	Yakima	8,901	4,208	794	.....	.....	.....
Totals.....		33,980	21,189	2,657	32,298	37,479	2,952

COUNTIES		JOINT SENATORIAL DISTRICTS					
		First District		Tenth District		Eleventh District	
		Rep.	Dem.	Rep.	Dem.	Rep.	Dem.
		W.A. Bolinger	J. W. Faulkner	Elgin V. Kuykendall	C. J. Thronson	O. T. Cornwell	E. G. Cox
1	Adams					1,280	1,108
2	Asotin			1,170	822		
3	Benton						
4	Chelan						
5	Clallam						
6	Clarke						
7	Columbia			1,144	1,182		
8	Cowlitz						
9	Douglas	1,145	1,885				
10	Ferry	588	804				
11	Franklin					780	816
12	Garfield			1,008	498		
13	Grant	1,007	1,118				
14	Grays Harbor						
15	Island						
16	Jefferson						
17	King						
18	Kitsap						
19	Kittitas						
20	Klickitat						
21	Lewis						
22	Lincoln						
23	Mason						
24	Okanogan	2,580	2,810				
25	Pacific						
26	Pend Oreille						
27	Pierce						
28	San Juan						
29	Skagit						
30	Skamania						
31	Snohomish						
32	Spokane						
33	Stevens						
34	Thurston						
35	Wahkiakum						
36	Walla Walla					2,002	1,622
37	Whatcom						
38	Whitman						
39	Yakima						
Totals.....		5,980	6,002	3,407	2,497	4,122	3,541

COUNTIES		JOINT SENATORIAL DISTRICTS						
		Thirteenth District		Fifteenth District			Twenty-Third District	
		Rep.	Dem.	Rep.	Dem.	Soc.	Rep.	Dem.
		J. B. Adams	John H. Ferryman	D. V. Morthland	H. O. Davis	J. W. Martin	Peter Iverson	Marcus M. Bowman
1	Adams							
2	Asotin							
3	Benton			1,577	1,045	316		
4	Chelan	2,614	3,085					
5	Clallam							
6	Clarke							
7	Columbia							
8	Cowlitz							
9	Douglas							
10	Ferry							
11	Franklin							
12	Garfield							
13	Grant							
14	Grays Harbor							
15	Island						997	567
16	Jefferson							
17	King							
18	Kitsap						3,688	2,153
19	Kittitas	2,520	2,061					
20	Klickitat							
21	Lewis							
22	Lincoln							
23	Mason						904	540
24	Okanogan							
25	Pacific							
26	Pend Oreille							
27	Pierce							
28	San Juan							
29	Skagit							
30	Skamania							
31	Snohomish							
32	Spokane							
33	Stevens							
34	Thurston							
35	Wahkiakum							
36	Walla Walla							
37	Whatcom							
38	Whitman							
39	Yakima			8,250	5,000	742		
	Totals.....	5,184	5,166	9,827	6,045	1,068	5,589	3,265

		JUDGES OF SUPERIOR COURT.—JOINT DISTRICTS								
COUNTIES		John Truax	Edward A. Davis	Chester F. Miller	G. W. Jewett	John M. Ralston	(Two to be elected)		H. W. B. Hewen	Edw. H. Wright
							John R. Mitchell	D. F. Wright		
1	Adams	1,847	405	789						
2	Asotin									
3	Benton	1,622	785							
4	Chelan									
5	Clallam					1,378				
6	Clarke									
7	Columbia			944						
8	Cowlitz									
9	Douglas									
10	Ferry									
11	Franklin	559	894							
12	Garfield			773	2					
13	Grant									
14	Grays Harbor									
15	Island					759				
16	Jefferson					906				
17	King									
18	Kitsap									
19	Kittitas									
20	Klickitat									
21	Lewis									
22	Lincoln									
23	Mason						850	874		
24	Okanogan									
25	Pacific								2,285	1,164
26	Pend Oreille									
27	Pierce									
28	San Juan									
29	Skagit									
30	Skamania									
31	Snohomish									
32	Spokane									
33	Stevens									
34	Thurston						3,069	3,000		
35	Wahkiakum								370	284
36	Walla Walla									
37	Whatcom									
38	Whitman									
39	Yakima									
Totals.....		4,028	2,084	2,506	2	3,042	3,919	3,874	2,655	1,448

Second Biennial Report

		JUDGES OF SUPERIOR COURT.—JOINT DISTRICT							
COUNTIES		F. Leo Grinstead	Daniel Henry Carey	W. T. Darch	B. L. Hubbell	Sam B. Hill	W. E. Southard	E. K. Fendergast	C. H. Neal
1	Adams								
2	Asotin								
3	Benton								
4	Chelan								
5	Clallam								
6	Clarke								
7	Columbia								
8	Cowlitz			1,432	32				
9	Douglas					1,000	1		
10	Ferry							708	4
11	Franklin								
12	Garfield								
13	Grant					1,200	12		
14	Grays Harbor								
15	Island								
16	Jefferson								
17	King								
18	Kitsap								
19	Kittitas								
20	Klickitat			1,457	1				
21	Lewis								
22	Lincoln								
23	Mason								
24	Okanogan							2,417	35
25	Pacific								
26	Pend Oreille	584	576						
27	Pierce								
28	San Juan								
29	Skagit								4
30	Skamania			411	3				
31	Snohomish								
32	Spokane								
33	Stevens	2,402	2,433						
34	Thurston								
35	Wahkiakum								
36	Walla Walla								
37	Whatecom								
38	Whitman								
39	Yakima								
Totals.....		2,986	2,909	2,900	30	2,960	13	2,125	39

THE VOTE FOR AND AGAINST CONSTITUTIONAL AMENDMENT, EACH INITIATIVE MEASURE, AND EACH REFERENDUM MEASURE, AND THE NAME OF EACH CANDIDATE, THE NUMBER OF VOTES RECEIVED BY EACH, AND THE OFFICE SOUGHT, ARE AS FOLLOWS:

AMENDMENT TO THE CONSTITUTION PROPOSED BY THE LEGISLATURE.

For Constitutional Amendment	88,963
Against Constitutional Amendment	180,179

PROPOSED BY INITIATIVE PETITION.

For Initiative Measure No. 24.....	98,843
Against Initiative Measure No. 24	245,399
For Initiative Measure No. 18.....	48,354
Against Initiative Measure No. 18.....	263,390

PASSED BY THE LEGISLATURE AND ORDERED REFERRED BY PETITION.

For Referendum Measure No. 3.....	62,117
Against Referendum Measure No. 3.....	196,363
For Referendum Measure No. 4.....	63,646
Against Referendum Measure No. 4.....	193,686
For Referendum Measure No. 5.....	49,370
Against Referendum Measure No. 5.....	200,499
For Referendum Measure No. 6.....	85,672
Against Referendum Measure No. 6.....	183,042
For Referendum Measure No. 7.....	46,820
Against Referendum Measure No. 7.....	201,742
For Referendum Measure No. 8.....	45,264
Against Referendum Measure No. 8.....	195,253
For Referendum Measure No. 9.....	67,205
Against Referendum Measure No. 9.....	181,833

PRESIDENTIAL ELECTORS.

Republican Party.

Warren H. Lewis	167,208
Luther P. Weedln	166,340
E. E. Beard	166,298
George E. Finley.....	166,375
J. Henry Smith.....	166,006
Richard M. Buttle.....	166,143
J. A. Perkins.....	165,971

Democratic Party.

D. M. Drumheller.....	183,338
George F. Christensen	183,230
C. C. Brown.....	183,242
Francis Donahoe	183,028
G. W. Hoxie	182,806
Joseph A. Sloan.....	182,813
Edwin M. Connor.....	134,481
*A. T. Stream.....	134,481

*Deceased—Edwin M. Connor substituted before election.

Prohibition Party.

Salome B. Lippy.....	6,868
Walter F. McDowell.....	6,840
John Anderson	6,838
L. Stanton	6,814
E. B. Crary	6,112
R. M. Shoemaker.....	6,819
C. C. Gridley.....	6,790

Socialist Party.

Marie Nielsen	22,800
Laura M. House.....	22,515
Helen Camp	22,510
Bertha Zletz	22,488
Allen Brooks	22,518
Bonner Bartlett	22,482
Kate Sutton	22,490

Socialist Labor Party.

Gotfried Gustafson	730
Jerry E. Sullivan.....	711
John C. Shafer	701
Leslie H. Sawyer.....	697
Arne Hage	699
Fred Kurtzman	690
Andrew P. Anderson.....	701

UNITED STATES SENATOR.

Miles Poindexter, Republican.....	202,287
George Turner, Democrat.....	135,339
Walter J. Thompson, Progressive.....	1,442
Joseph A. Campbell, Prohibition	4,411
Bruce Rogers, Socialist	21,709

REPRESENTATIVE IN CONGRESS.

(First Congressional District.)

John F. Miller, Republican.....	38,769
George F. Cotterill, Democrat.....	35,718
E. B. Tryon, Socialist.....	2,634

(Second Congressional District.)

Lindley H. Hadley, Republican	31,655
Mrs. Frances C. Axtell, Democrat ..	28,075
R. J. Ollinger, Socialist.....	7,537

(Third Congressional District.)

Albert Johnson, Republican	47,415
George P. Flahburne, Democrat.....	29,949
Geo. Cotterill, Progressive.....	2
W. F. Ferguson, Socialist.....	5,662

(Fourth Congressional District.)

William L. LaFollette, Republican.....	33,950
Chas. W. Masterson, Democrat.....	21,189
Walter Price, Socialist.....	2,637

(Fifth Congressional District.)

Tom Corkery, Republican.....	32,298
C. C. Dill, Democrat	37,479
John M. Powers, Socialist.....	2,952

STATE SENATOR.

(First District.)

W. A. Bolinger, Republican :

Grant	1,607	
Douglas	1,145	
Ferry	588	
Okanogan	2,590	
Total		5,930

J. W. Faulkner, Democrat :

Grant	1,115	
Douglas	1,835	
Ferry	804	
Okanogan	2,310	
Total		6,062

(Third District.)

Harve H. Phipps, Republican :

Spokane	7,090
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J. F. Ginnis, Democrat :

Spokane	5,482
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(Fourth District.)

R. A. Hutchinson, Republican :

Spokane	5,691
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Geo. W. Armstrong, Democrat :

Spokane	4,529
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(Fifth District.)

E. Ben Johnson, Republican :

Spokane	3,650
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Clarence Martin, Democrat :

Spokane	3,493
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(Ninth District.)

W. C. McCay, Republican :

Whitman	2,496
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W. W. Brand, Democrat :

Whitman	2,837
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(Tenth District.)

Elgin V. Kuykendall, Republican :

Asotin	1,170	
Columbia	1,144	
Garfield	1,093	
Total		3,407

C. J. Thronson, Democrat :

Asotin	822	
Columbia	1,182	
Garfield	493	
Total		2,497

(Eleventh District.)

O. T. Cornwell, Republican :

Adams	1,280	
Franklin	780	
Walla Walla	2,062	
Total		4,122

E. G. Cox, Democrat :

Adams	1,103	
Franklin	816	
Walla Walla	1,622	
Total		3,541

(Twelfth District.)

D. H. Cox, Republican :

Walla Walla	2,657	
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Ben F. Hill, Democrat :

Walla Walla	2,848	
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(Thirteenth District.)

J. B. Adams, Republican :

Chelan	2,614	
Kittitas	2,520	
Total		5,134

John H. Ferryman, Democrat :

Chelan	3,085	
Kittitas	2,081	
Total		5,166

(Fourteenth District.)

Chas. E. Myers, Republican :

Lincoln	2,907	
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C. W. Bethel, Democrat :

Lincoln	2,193	
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(Fifteenth District.)

D. V. Morthland, Republican :

Benton	1,577	
Yakima	8,250	
Total		9,827

H. C. Davis, Democrat :

Benton	1,045	
Yakima	5,000	
Total		6,045

J. W. Martin, Socialist :

Benton	316	
Yakima	742	
Total		1,058

(Seventeenth District.)

Edward L. French, Republican :

Clarke	5,061	
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M. M. Connor, Democrat :

Clarke	2,455	
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H. D. Burrows, Socialist :

Clarke	678	
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(Eighteenth District.)

F. G. Barnes, Republican :	
Cowlitz	2,186
Geo. W. Taylor, Democrat :	
Cowlitz	1,092
John F. Mackey, Socialist :	
Cowlitz	365

(Twentieth District)

E. E. Teachnor, Republican :	
Lewis	4,474
A. E. Judd, Democrat :	
Lewis	4,931

(Twenty-Second District.)

P. H. Carlyon, Republican :	
Thurston	3,497
D. W. Gules, Socialist :	
Thurston	1,330

(Twenty-Third District.)

Peter Iverson, Republican :	
Mason	904
Kitsap	3,688
Island	997
Total	5,589
Marcus M. Bowman, Democrat :	
Mason	540
Kitsap	2,158
Island	567
Total	3,265

(Twenty-Fifth District.)

W. M. Karshner, Republican :	
Pierce	4,947
Hugh Herren, Democrat :	
Pierce	2,769

(Twenty-Seventh District.)

Walter S. Davis, Republican :	
Pierce	2,725
Wm. B. Coffee, Democrat :	
Pierce	1,990

(Twenty-Eighth District.)

Wilburn Fairchild, Republican :	
Pierce	2,279

(Thirty-Eighth District.)

Joseph H. Smith, Republican :	
Snohomish	5,204
Halvor Quam, Democrat :	
Snohomish	3,852
John E. Goudie, Progressive	
Snohomish	180
Walter Reece, Socialist :	
Snohomish	1,678

(Forty-First District.)

Ed. Brown, Republican :	
Whatcom	3,676
J. J. Falknor, Progressive :	
Whatcom	1,294
Milton C. Johnson, Socialist :	
Whatcom	1,186

GOVERNOR.

Henry McBridge, Republican	167,809
Ernest Lister, Democrat	181,645
James E. Bradford, Progressive.....	2,894
A. B. L. Gellerman, Prohibition.....	3,514
L. E. Katterfeld, Socialist.....	21,117
James E. Riordan, Socialist Labor.....	623

LIEUTENANT GOVERNOR.

Louis F. Hart, Republican.....	177,269
Thomas Lally, Democrat.....	149,196
Nettle Hallenbeck, Prohibition.....	5,235
Katherine H. Hodges, Socialist.....	32,505

SECRETARY OF STATE.

I. M. Howell, Republican.....	187,851
J. M. Tadlock, Democrat	136,387
Frank A. Rust, Progressive	1,975
W. J. Warren, Prohibition.....	4,908
James Grant, Socialist.....	22,685

STATE TREASURER.

W. W. Sherman, Republican.....	186,304
George J. Galvin, Democrat.....	133,787
Mary M. Wade, Prohibition.....	6,273
Mary Stevenson, Socialist.....	23,159

STATE AUDITOR.

C. W. Clausen, Republican.....	181,958
Otto A. Case, Democrat.....	142,265
N. A. Thompson, Prohibition.....	5,030
E. E. Owsley, Socialist.....	22,793

ATTORNEY GENERAL.

W. V. Tanner, Republican.....	183,977
Henry Alberts McLean, Democrat.....	139,085
M. J. Schwartz, Socialist.....	23,267

SUPERINTENDENT OF PUBLIC INSTRUCTION.

Josephine Corliss Preston, Republican.....	192,236
J. H. Morgan, Democrat	136,458
Frances C. Sylvester, Socialist.....	23,669

COMMISSIONER OF PUBLIC LANDS.

Clark V. Savidge, Republican.....	187,269
Robert E. McFarland, Democrat.....	131,975
Joe Smith, Progressive.....	2,111
Frank Cort, Socialist	23,207

STATE INSURANCE COMMISSIONER.

H. O. Fishback, Republican.....	189,645
J. H. Hemer, Democrat.....	127,079
L. L. Snow, Progressive.....	2,356
F. J. McKay, Socialist.....	23,354

JUDGES OF SUPREME COURT.

Six Year Term.

Emmett N. Parker.....	178,670
Mark A. Fullerton	178,136
George E. Morris.....	175,086
Peter Husby	44
Edgar G. Mills.....	1,055

Four Year Term.

J. Stanley Webster.....	170,653
Elihu Barker	54

JUDGES OF SUPERIOR COURT.

John Truax :

Adams	1,847
Benton	1,622
Franklin	559
Total	4,028

Edward A. Davis :

Adams	405
Benton	735
Franklin	894
Total	2,034

Chester F. Miller :

Asotin	789
Columbia	944
Garfield	775
Total	2,506

G. W. Jewett :

Asotin	
Columbia	
Garfield	2
Total	2

John M. Ralston :

Clallam	1,378
Island	759
Jefferson	905

John R. Mitchell :

Mason	850
Thurston	3,069
Total	3,919

D. F. Wright :

Mason	874
Thurston	3,000
Total	3,874

H. W. B. Hewen :

Pacific	2,235
Wahkiakum	370
Total	2,605

Edw. H. Wright :		
Pacific	1,164	
Wahkiakum	284	
Total		1,448
F. Leo Grinstead :		
Pend Oreille	584	
Stevens	2,402	
Total		2,986
Daniel Henry Carey :		
Pend Oreille	876	
Stevens	2,433	
Total		3,309
W. T. Darch :		
Cowlitz	1,432	
Klickitat	1,457	
Skamania	411	
Total		3,300
B. L. Hubbell :		
Cowlitz	32	
Klickitat	1	
Skamania	3	
Total		36
Sam B. Hill :		
Douglas	1,690	
Grant	1,290	
Total		2,989
W. E. Southard :		
Douglas	1	
Grant	112	
Total		18
E. K. Pendergast :		
Ferry	708	
Okanogan	2,417	
Total		3,125
C. H. Neal :		
Ferry	4	
Okanogan	35	
Total		39
Augustus Brawley :		
Skagit	4,696	
San Juan	662	
Total		5,358

STATE REPRESENTATIVES.

(First District—Stevens County.)

Z. E. Hayden, Republican	2,804
W. H. Anderson, Republican	2,742
W. A. Haskins, Democrat	2,774
John Selmer, Democrat	2,816
Archie M. White, Socialist	713
James Chase, Socialist	704

(Second District—Spokane County.)

Ira Honefenger, Republican	6,445
L. L. Westfall, Republican	6,412
Henry A. Sprague, Democrat	5,837
Wm. Matthews, Democrat	5,846

(Third District—Spokane County.)

Albert A. Kelly, Republican.....	4,957
D. P. Reid, Republican.....	5,592
John Moran, Democrat.....	4,550
Horatio R. Davis, Democrat.....	4,932

(Fourth District—Spokane County.)

Olaf L. Olsen, Republican.....	3,740
A. R. Stratton, Republican.....	3,645
J. W. Allender, Democrat.....	3,271
T. J. Cain, Democrat.....	3,201

(Fifth District—Spokane County.)

Maurice Smith, Republican.....	2,290
L. Frank Ward, Republican.....	2,212
Chas. A. Aten, Democrat.....	1,970
Will Everett, Democrat.....	1,914

(Sixth District—Spokane County.)

Fred A. Adams, Republican.....	3,369
John Anderson, Republican.....	3,375
G. D. Linn, Democrat.....	2,590
Carl S. Evans, Democrat.....	2,523

(Seventh District—Whitman County.)

C. E. Hoover, Republican.....	2,766
Ray Jones, Republican.....	2,764
L. C. Miller, Democrat.....	2,264
Wm. Goodyear, Democrat.....	2,601

(Eighth District—Whitman County.)

George A. Weldon, Republican.....	2,628
Henry J. Clark, Republican.....	2,387
C. W. McCall, Democrat	2,655
J. C. Northrup, Democrat.....	2,592

(Ninth District—Asotin County.)

Elmer E. Halsey, Republican.....	1,249
Geo. W. Roup, Democrat.....	1,022

(Tenth District—Garfield County.)

J. T. Ledgerwood, Democrat.....	887
W. O. Long, Democrat.....	2

(Eleventh District—Columbia County.)

J. F. Rockhill, Republican	1,131
George Spalinger, Democrat.....	1,184

(Twelfth District—Walla Walla County.)

Geo. Ginn, Republican.....	1,761
A. L. Ray, Democrat	1,923

(Thirteenth District—Walla Walla County.)

John W. Summers, Republican.....	3,438
R. E. Butler, Republican.....	3,223
Rhoda Carmichael, Democrat.....	1,889

(Fourteenth District—Franklin County.)

L. L. Long, Republican.....	1,005
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(Fifteenth District—Adams County.)

M. W. Anthony, Republican.....	1,284
J. M. Moorman, Democrat.....	1,276

(Sixteenth District—Lincoln County.)

W. G. Duncan, Republican.....	2,449
Mike Tanner, Republican.....	2,247
E. L. Farnsworth, Democrat.....	2,827
J. J. Cameron, Democrat.....	2,452
Wm. N. Childs, Socialist.....	205
Geo. E. Smith, Socialist.....	201

(Seventeenth District—Okanogan County.)

R. L. Picken, Republican.....	2,161
E. F. Banker, Democrat.....	2,237
J. L. Freeman, Socialist.....	820

(Eighteenth District—Douglas County.)

A. B. Cunningham, Republican.....	1,291
J. A. Cross, Democrat.....	1,759

(Nineteenth District—Kittitas County.)

J. C. Hubbell, Republican.....	3,319
D. O. Kearby, Democrat.....	3,405

(Twentieth District—Yakima County.)

Wm. P. Sawyer, Republican.....	9,108
Ina Phillips Williams, Republican.....	9,421
H. A. LaBerge, Democrat.....	4,697
Esta Oscar Stow, Prohibition.....	493
Edw. Maurer, Socialist.....	778

(Twenty-First District—Klickitat County.)

John C. Crawford, Republican.....	1,607
F. E. Flynn, Democrat.....	1,451

(Twenty-Second District—Skamania County.)

Elmer E. Shields, Republican.....	491
E. M. Cummings, Democrat.....	420

(Twenty-Third District—Clarke County.)

C. W. Ryan, Republican.....	5,157
Geo. McCoy, Republican.....	4,944
E. E. Edmonds, Democrat.....	2,395
O. C. Hughes, Democrat.....	2,413
O. T. Clarke, Socialist.....	706
Walter S. Vall, Socialist.....	893

(Twenty-Fourth District—Cowlitz County.)

L. M. Sims, Republican.....	2,242
R. H. Mitchel, Democrat.....	1,056
W. O. Mallery, Socialist.....	359

(Twenty Fifth District—Wahkiakum County.)

Joseph Girard, Republican.....	435
M. Gorman, Democrat.....	419

(Twenty-Sixth District—Pacific County.)

Fred A. Hart, Republican.....	3,207
Fletcher Gorman, Democrat.....	6

(Twenty-seventh District—Lewis County.)

H. H. Swofford, Republican.....	5,598
J. S. Siler, Republican.....	5,560
J. E. Lease, Republican.....	5,633
Thos. Hoss, Democrat.....	3,716
Rufus S. Siler, Democrat.....	3,820
P. K. Hargreaves, Democrat.....	3,498
Nels Classe, Socialist.....	740

(Twenty-Eighth District—Thurston County.)

C. C. Aspinwall, Republican.....	3,784
L. J. Morrison, Republican.....	3,257
A. S. Caton, Non-Partisan.....	1,864
Adam Copple, Socialist.....	765
Vol Eddy, Socialist.....	818

(Twenty-Ninth District—Grays Harbor County.)

Geo. W. Gauntlett, Republican.....	4,447
A. E. Graham, Republican.....	4,352
H. T. Ash, Socialist.....	985
Louis E. Rader, Socialist.....	987

(Thirtieth District—Grays Harbor County.)

M. C. Harris, Republican.....	1,394
C. W. Hodgdon, Democrat.....	1,841
O. C. Whitney, Socialist.....	533

(Thirty-First District—Mason County.)

Mark E. Reed, Republican.....	1,103
Earl Crisman, Socialist.....	203

(Thirty-Second District—Kitsap County.)

J. Howard Shattuck, Republican.....	4,357
W. E. Westerman, Socialist.....	847

(Thirty-Third District—Jefferson County.)

William Bishop, Republican.....	1,343
H. B. Gardner, Republican.....	1,419
A. H. Tucker, Democrat.....	606
C. Bishir, Socialist.....	189

(Thirty-Fourth District—Clallam County.)

J. W. Lindsay, Republican.....	1,342
A. J. Cosser, Democrat.....	1,503
C. A. Hamilton, Socialist.....	357

(Thirty-Fifth District—Pierce County.)

Elmer E. Healey, Republican.....	4,184
Abe Morris, Republican.....	4,173
W. J. Octon, Democrat.....	3,352
H. J. Cothery, Democrat.....	3,244

(Thirty-Sixth District—Pierce County.)

Guy E. Kelly, Republican.....	5,583
Torger Peterson, Republican.....	5,381
Wm. B. Burrill, Democrat.....	3,999
Wm. B. Chandler, Democrat.....	3,819

(Thirty-Seventh District—Pierce County.)

J. H. Davis, Republican.....	2,724
Wm. C. Elliott, Republican.....	2,830
Rush G. Faler, Democrat.....	1,943
W. H. Coffin Democrat.....	1,832

(Thirty-Eighth District—Pierce County.)

Hiram E. Washburn, Republican.....	2,860
Geo. W. Thompson, Republican	2,852

(Thirty-Ninth District—Pierce County.)

Claude A. Young, Republican.....	4,459
Dr. W. P. Goff, Republican.....	5,131
Paul Newman, Democrat.....	3,818
Edward M. Benjamin, Prohibition.....	514

(Fortieth District—King County.)

Fred J. Mess, Republican.....	3,083
Walter J. Lunn, Republican	3,135
F. H. Tonkin, Republican.....	2,958
Otto Tamm, Democrat.....	2,860
C. E. West, Democrat.....	2,883
Fred Nelson, Democrat.....	3,006
Jas. Lund, Socialist.....	306
Allen Brooks, Socialist.....	303

(Forty-First District—King County.)

Paul W. Houser, Republican.....	7,381
A. E. Fuller, Republican.....	7,214
John T. Casey, Democrat.....	6,511
E. G. Congleton, Democrat.....	6,307
Kate Lawrence, Socialist.....	820
Carrie Payne, Socialist.....	793

(Forty-Second District—King County.)

W. T. Christensen, Republican.....	12,338
Frank E. Boyle, Republican.....	11,146
Clarence L. Gere, Democrat.....	10,310
Geo. N. Hodgdon, Democrat.....	10,285
Walter H. Villiers, Socialist.....	946
B. H. Miller, Socialist.....	975

(Forty-Third District—King County.)

Victor Zednick, Republican.....	2,698
Ralph R. Knapp, Republican.....	2,613
A. E. Flagg, Democrat.....	1,872
Elizabeth Hutchinson, Democrat.....	1,728
Joe Miller, Socialist.....	185

(Forty-Fourth District—King County.)

Robert E. Dwyer, Republican.....	1,547
Frank H. Monogue, Republican.....	1,484
Robert G. Cauthorn, Democrat.....	1,346
Tom. S. Patterson, Democrat.....	1,306
M. F. Carkeek, Progressive.....	22
Charlotte F. Jones, Socialist.....	106
Albert Heikke, Socialist.....	102

(Forty-Fifth District—King County.)

Frank H. Renick, Republican.....	1,594
Robert Grass, Republican.....	1,601
Richard Seelye Jones, Democrat.....	1,581
Joseph R. Manning, Democrat.....	1,550
Peter Desmore, Progressive.....	47
R. H. Smith, Socialist.....	172
Jessie Humphrey, Socialist.....	176

(Forty-Sixth District—King County.)

Fred W. Hastings, Republican.....	4,247
Stephen A. Hull, Republican.....	3,992
Frank W. Cotterill, Democrat.....	3,686
Anna Louise Strong, Democrat.....	3,768

(Forty-Seventh District—King County.)

John R. Wilson, Republican.....	9,581
E. H. Gule, Republican.....	9,453
Herman W. Ross, Democrat.....	5,706
Mrs. M. B. Harker, Democrat.....	5,806
C. F. Downey, Progressive.....	237
Emil J. Brandt, Progressive.....	257
Maud Francis Schmitt, Socialist.....	336
Lalla Rogers, Socialist.....	336

(Forty-Eighth District—Snohomish County.)

Thomas N. Swale, Republican.....	5,986
S. Frank Spencer, Republican.....	5,880
Alex. Marsolais, Democrat.....	3,149
E. G. Reep, Democrat.....	3,314
George Bartlett, Socialist.....	1,723
Sam'l T. Roberts, Socialist.....	1,717

(Forty-Ninth District—Snohomish County.)

M. G. Thomle, Republican.....	4,176
C. W. Gorham, Republican.....	4,038
C. H. Cleaver, Democrat.....	2,545
M. J. McGuinness, Democrat.....	2,500
R. W. Thompson, Socialist.....	1,204
W. J. Fortson, Socialist.....	1,190

(Fiftieth District—Island County.)

W. E. Terry, Republican.....	874
Floyd Hatfield, Democrat.....	736
W. H. Hazen, Socialist.....	161

(Fifty-First District—Skagit County.)

J. M. Shields, Republican.....	5,448
Fred B. Fulton, Republican.....	5,841
J. O. Rudene, Republican.....	5,953
I. E. Shranger, Democrat.....	3,559
Dora Cryderman, Progressive.....	561
W. W. Underwood, Socialist.....	1,088
Chas. Millward, Socialist.....	1,176
E. B. O'Grady, Socialist.....	1,137

(Fifty-Second District—San Juan County.)

E. H. Nash, Republican.....	864
P. A. Perry, Democrat.....	433

(Fifty-Third District—Whatcom County.)

C. H. Hoff, Republican.....	8,395
Tom Brown, Republican.....	8,257
C. John H. Dahl, Democrat.....	1,712
M. C. Davenport, Democrat.....	2,367
C. B. Legoe, Progressive.....	1,064
Ernest Myers, Socialist.....	1,173
J. A. Greenough, Socialist.....	1,186

(Fifty-Fourth District—Whatcom County.)

Charles I. Roth, Republican.....	3,623
Fred D. Yale, Republican.....	4,050
F. J. Barlow, Democrat.....	2,824
Chas. S. Sampley, Progressive.....	1,401
Mrs. Morris J. Schwartz, Socialist.....	840
Frank Bickford, Socialist.....	817

(Fifty-Fifth District—Ferry County.)

A. L. Bradley, Republican.....	768
Alex A. Anderson, Democrat.....	691
Peter Harrison, Socialist.....	216

(Fifty-Sixth District—Chelan County.)

Sam R. Summer, Republican.....	2,625
S. A. Pool, Democrat.....	3,126

(Fifty-Eighth District—Benton County.)

Gordon C. Moores, Republican.....	1,766
J. B. Clements, Democrat.....	865
I. N. Newkirk, Socialist.....	338

(Fifty-Ninth District—Grant County.)

A. H. Wilburn, Republican.....	961
John Urquhart, Democrat.....	1,261
Frank W. McCann, Socialist.....	724

(Sixtieth District—Pend Oreille County.)

H. H. Murray, Republican.....	1,051
C. C. Thompson, Democrat.....	1,008

NON-PARTISAN JUDICIARY.

SUPREME COURT JUDGES.

Chief justice.....	Overton G. Ellis.....	Tacoma
	Mark A. Fullerton.....	Colfax
	Stephen J. Chadwick.....	Olympia
	O. R. Holcomb.....	Ritzville
	John F. Main.....	Seattle
	Wallace Mount.....	Spokane
	Emmett N. Parker.....	Tacoma
	George E. Morris.....	Seattle
	J. Stanley Webster.....	Spokane

SUPERIOR COURT JUDGES.

Adams county.....	John Truax.....	Ritzville
Asotin county.....	Chester F. Miller.....	Dayton
Benton county.....	John Truax.....	Ritzville
Chelan county.....	Wm. A. Grimshaw.....	Wenatchee
Clallam county.....	John M. Ralston.....	Pt. Angeles
Clarke county.....	R. H. Back.....	Vancouver
Columbia county.....	Chester F. Miller.....	Dayton
Cowlitz county.....	W. T. Darch.....	Kalama
Douglas county.....	Sam B. Hill.....	Waterville
Ferry county.....	C. H. Neal.....	Oroville
Franklin county.....	John Truax.....	Ritzville
Garfield county.....	Chester F. Miller.....	Dayton
Grant county.....	Sam B. Hill.....	Waterville
Grays Harbor county.....	Ben Sheeks.....	Montesano
	Geo. D. Abel.....	Montesano
Island county.....	John M. Ralston.....	Pt. Angeles
Jefferson county.....	John M. Ralston.....	Pt. Angeles
King county.....	A. W. Frater.....	Seattle
	J. T. Ronald.....	Seattle
	Roebrt B. Albertson.....	Seattle
	King Dykeman.....	Seattle
	Mitchell Gilliam.....	Seattle
	Boyd J. Tallman.....	Seattle
	Kenneth Mackintosh.....	Seattle
	John S. Jurey.....	Seattle
	Everett Smith.....	Seattle
Kitsap county.....	Walter M. French.....	Pt. Orchard
Kittitas county.....	John B. Davidson.....	Ellensburg
Klickitat county.....	W. T. Darch.....	Kalama
Lewis county.....	W. A. Reynolds.....	Chehalis
Lincoln county.....	Joseph Sessions.....	Davenport
Mason county.....	John R. Mitchell.....	Olympia
	D. F. Wright.....	Shelton
Okanogan county.....	C. H. Neal.....	Oroville
Pacific county.....	H. W. B. Hewen.....	South Bend
Pend Oreille county.....	Daniel Henry Carey.....	Colville
Pierce county.....	Ernest M. Card.....	Tacoma
	W. O. Chapman.....	Tacoma
	M. L. Clifford.....	Tacoma
	C. M. Easterday.....	Tacoma
San Juan county.....	Augustus Brawley.....	Mt. Vernon
Skagit county.....	Augustus Brawley.....	Mt. Vernon

Skamania county.....	W. T. Darch.....	Kalama
Snohomish county.....	Ralph C. Bell.....	Everett
	Guy C. Alton.....	Everett
Spokane county.....	Wm. A. Huneke.....	Spokane
	Bruce Blake.....	Spokane
	David W. Hurn.....	Spokane
	Hugo E. Oswald.....	Spokane
	R. M. Webster.....	Spokane
Stevens county.....	Daniel Henry Carey.....	Colville
Thurston county.....	John R. Mitchell.....	Olympia
	D. F. Wright.....	Shelton
Wahkiakum county.....	H. W. Hewen.....	South Bend
Walla Walla county.....	Edward C. Mills.....	Walla Walla
Whatcom county.....	Ed. E. Hardin.....	Bellingham
	Wm. H. Pemberton.....	Bellingham
Whitman county.....	R. L. McCroskey.....	Colfax
Yakima county.....	George B. Holden.....	North Yakima
	Harcourt M. Taylor.....	North Yakima


STATE OF WASHINGTON

Minutes and Official Proceedings

OF THE

State Board of Equalization

SESSION OF 1916

OLYMPIA, WASH.
FRANK M. LAMBORN  PUBLIC PRINTER
1916

PROCEEDINGS
OF THE
STATE BOARD OF EQUALIZATION
SESSION OF 1916

OLYMPIA, WASHINGTON.
TUESDAY, September 5, 1916.

In accordance with the provisions of the law relative to the proceedings of the State Board of Equalization for the equalization of taxes, the Board met in the office of the Commissioner of Public Lands on the 5th day of September, 1916, the following named persons designated by law as members of such Board being present: C. W. Clausen, State Auditor and Chairman *ex-officio*; Clark V. Savidge, Commissioner of Public Lands and Secretary *ex-officio*, and Arthur A. Lewis, member of the Public Service Commission.

On motion of Mr. Lewis, Fred G. Cook was elected clerk of the Board at a salary of \$6.00 per day.

On motion, the following program for the hearings was adopted by the Board:

September 7: Eastern Washington counties.

September 8: Western Washington counties.

September 11: Electric railways and small steam roads.

September 11 and 13: Steam railways.

The secretary was instructed to procure the use of the Senate chamber as a place for holding the hearings. The secretary was also authorized to secure the services of a stenographer.

On motion, the Board adjourned to meet Thursday, September 7th, at 9 a. m.

THURSDAY, September 7, 1916.

The Board of Equalization met at 9 a. m., with all members present, Chairman C. W. Clausen presiding.

The secretary reported the appointment of Miss Inez McKenzie as stenographer.

The chairman outlined to those present the lines along which testimony was desired.

A telegram was received from Mr. W. T. Beck, representing the Spokane and British Columbia Railway, stating that it would be impossible for him to appear before the Board on the date fixed, and asking that the hearing be postponed until the 19th inst. The request was granted.

The following representatives from the various counties were then heard, as follows:

William Clodius, county assessor, on behalf of Adams county; W. G. Woodruff, county assessor, on behalf of Asotin county; A. H. Wheaton, county assessor, on behalf of Benton county; Ernest G. Spencer, county assessor, Dr. D. W. King, Will C. Shaffer, K. W. White, A. N. Corbin, on behalf of Chelan county; Blanche Beckett, county assessor, on behalf of Columbia county; K. W. White, county assessor, on behalf of Douglas county; Fred McCotter, county assessor, on behalf of Franklin county; George S. Brown, county assessor, on behalf of Lincoln county.

At 12 m., a recess was taken until 1:30 p. m.

The Board reconvened at 1:30 p. m., all members present.

The following representatives of the different counties were then heard:

W. D. McNair, county assessor, on behalf of Yakima county; Mrs. L. A. Kenney, county assessor, and E. K. Brown, on behalf of Kittitas county; W. R. Prowell, on behalf of Chelan county; J. L. Milner, county assessor, on behalf of Grant county; C. H. Knosher, county assessor, and Chas. E. Johnson, on behalf of Okanogan county; E. D. Purchase, county assessor, on behalf of Pend Oreille county; R. E. Nichols, county assessor, on behalf of Klickitat county; A. E. Dodson, county assessor, on behalf of Stevens county; M. C. True, county assessor, on behalf of Whitman county.

At 4:30 p. m. the Board took recess until the next day at 9 a. m.

FRIDAY, September 8, 1916.

The Board met at 9 a. m., with all members present, Chairman C. W. Clausen presiding.

Representatives of the different counties were then heard as follows:

E. A. Prickett, county assessor, on behalf of Clallam county;
E. A. Seaborg, county assessor, on behalf of Pacific county;
H. L. Hanson, county assessor, on behalf of Jefferson county;
J. M. Thatcher, county assessor, on behalf of King county;
T. D. Davies, county assessor, on behalf of Snohomish county;
H. D. McArthur, county assessor, on behalf of Whatcom county.

At 12 m., a recess was taken until 1:30 p. m.

The Board reconvened at 1:30 p. m., with all members present.

Telegraphic request was received from representatives of the Spokane & Inland Railway, asking that its hearing be postponed until September 14th, because of the inability of its representatives to be present on the date fixed. The request was granted.

Representatives of the different counties were then heard as follows:

James McClure, county assessor, on behalf of Lewis county;
Sherman Hoover, county assessor, Alex Polson, Mark Reed,
A. D. Graham, E. B. Arthaud, E. J. Maurant, J. E. Calder,
F. H. Lamb, R. H. Fleet, M. C. Harris, on behalf of Grays Harbor county; James J. Cameron, county assessor, on behalf of Pierce county.

At 4 p. m. the Board took recess until September 11th at 9 a. m.

MONDAY, September 11, 1916.

The Board met at 9 a. m., with all members present, Chairman C. W. Clausen presiding.

The secretary read a request from the board of county commissioners of Clallam county, asking that they be given an op-

portunity to be heard on September 13th relative to the valuations placed upon property by the various assessors of the state. The secretary was instructed to advise them that they could be heard on either the 14th or the 15th inst.

The following representatives of transportation lines were then heard:

Walla Walla Valley Railway Company, Wm. H. Galvani; N. W. Brockett, representing the Everett Railway, Light & Power Company, Puget Sound Traction, Light & Power Co., Puget Sound Electric Company, Tacoma Railway & Power Co., Pacific Traction Co., Puget Sound International Railway & Power Co., Western Washington Power Co., Pacific Northwest Traction Co., Washington Water Power Company, A. F. S. Steele; Loyal Railway, John P. Hartman; Grays Harbor Railway & Light Company, J. B. Bridges, and P. A. Bertrand, general manager.

At 12 m., the Board took a recess until 1:30 p. m.

The Board reconvened at 1:30 p. m., with all members present and the following representatives of transportation lines were heard:

Willapa Electric Company, J. S. Thornton; Peninsular Railway Company, M. E. Reed; Floyd H. Williams, representing the Bellingham and Northern Railway, Puget Sound and Willapa Harbor Railway, Seattle, Port Angeles and Western Railway, Tacoma Eastern Railway, Chicago, Milwaukee & St. Paul Railway, Idaho and Washington Northern Railroad, Milwaukee Terminals Railway; Northern Pacific Railway and Centralia Eastern Railway, by M. T. Sanders, tax commissioner, Charles A. Murray, western tax attorney and commissioner; Great Northern Railway Company, John L. Snapp; Columbia and Puget Sound Railway, F. Greene; Oregon-Washington Railroad and Navigation Company, O. G. Edwards; Spokane, Portland and Seattle Railway, J. C. Daries.

At 3 p. m. the Board adjourned until Thursday, the 14th at 10:30 a. m.

THURSDAY, September 14, 1916.

The Board convened at 10:30 a. m., all members present, Chairman C. W. Clausen presiding.

The chairman reported telephonic advice from the board of county commissioners of Clallam county to the effect that they desired to be heard on the 18th instead of the date fixed by the Board. The change was agreed to.

The secretary presented a request from the Cowlitz County Taxpayers' League to be heard Monday, the 18th. The request was granted.

Mr. Will G. Graves appeared before the Board on behalf of the Spokane and Inland Railway Company. Mr. Arthur J. Shaw appeared on behalf of the Spokane International Railway Company.

The Board then adjourned to meet at the call of the chair.

FRIDAY, September 15, 1916.

The Board met at the call of the chairman at 11 a. m., all members being present, Chairman C. W. Clausen presiding.

The following were heard:

North Coast Power Company, E. M. Hayden and H. L. Harris; Spokane and British Columbia Railway Company, W. T. Beck.

The Board then adjourned to meet Monday the 18th at 10:30 a. m.

MONDAY, September 18, 1916.

The Board convened at 1:30 p. m., with all members present, Chairman C. W. Clausen presiding.

The following were heard:

Clallam County Commissioners, Devillo Lewis, Mr. Dan Earles; Cowlitz County Taxpayers' League, represented by J. T. Gear, Dr. Sims, W. A. Taylor; J. M. Thatcher presented

a letter written to the county board of equalization of King county, by the Seattle Real Estate Association.

The Board adjourned at 2:40 p. m. until 9 a. m., Tuesday, the 19th.

TUESDAY, September 19, 1916.

The Board convened at 9 a. m., with all members present, Chairman Clausen presiding.

The Board went into executive session for the purpose of equalizing the values of the different counties.

At 11 a. m. a recess was taken until 2:15 p. m.

The Board convened at 2:15 p. m. and went into executive session for the purpose of continuing with the equalization.

At 4:30 the Board adjourned, to meet at 9 a. m., Wednesday, the 20th.

WEDNESDAY, September 20, 1916.

The Board convened at 9 a. m., with all members present, Chairman Clausen presiding.

The Board went into executive session for the purpose of continuing with the equalization.

At this session the fixing of values of steam railways was taken up.

At 10:30 a. m. the Board took a recess until 1:30 p. m.

At 1:30 p. m. the Board convened, with all members present, Chairman Clausen presiding.

The Board went into executive session for the purpose of continuing with the equalization.

At 4:30 p. m. the Board adjourned, to meet Thursday, the 21st, at 9 a. m.

THURSDAY, September 21, 1916.

At 9 a. m. the Board convened, with all members present, Chairman Clausen presiding.

The Board went into executive session to continue with the equalization.

At this session the valuations of electric roads were taken up.

At 11 a. m. the Board took a recess until 1:30 p. m.

The Board convened at 1:30, with all members present, Chairman Clausen presiding.

The Board went into executive session for the purpose of continuing with the equalization.

At this session the valuations of telegraph lines were taken up and completed.

The Board adjourned at 2:30 to meet at the call of the chairman.

SATURDAY, September 23, 1916.

The Board met at 9:30 a. m., in response to the call of the chairman; present, C. W. Clausen, chairman, Clark V. Savidge, and Arthur A. Lewis.

The Board went into executive session for the purpose of continuing with the equalization.

At 12 m., adjournment was taken until 1:30 p. m.

Upon reconvening at 1:30 the Board went into executive session for the purpose of continuing with the equalization.

The matter of fixing the general fund levy was then taken up. After an exhaustive discussion, a levy of \$1,826,578.00 was fixed, a rate of 1.85 mills, Messrs. Clausen and Savidge voting for this levy, Mr. Lewis casting his vote for a levy of 1.25 mills.

The superintendent of public instruction certified that from the last reports of county superintendents the total number of children in this state of school age is 304,600.

In accordance with the requirements of the law, a levy of \$10.00 per school capita was made, which, after deducting

\$972,587.00, receipts from all other sources, leaves \$2,073,413.00 to be raised by taxation. Therefore a levy of 2.10 mills on the total valuation of taxable property of the state was fixed by the Board for school purposes, amounting to the sum of \$2,073,413.00.

The total levy for military purposes was fixed at \$197,468.00, a rate of 0.20 mills.

The total levy for permanent highways was fixed at \$1,481,009.00, a rate of 1.50 mills.

The total levy for public highways was fixed at \$987,340.00, a rate of 1.00 mill.

The total levy for the University of Washington was fixed at \$468,396.00, a rate of 0.475 mills; for the Washington State College \$320,885.00, a rate of 0.325 mills; for the Cheney State Normal School \$88,861.00, a rate of 0.09 mills; for the Bellingham State Normal School \$88,861.00, a rate of 0.09 mills; for the Ellensburg State Normal School \$69,114.00, a rate of 0.07 mills.

On motion, the state tax for general purposes, amounting to \$1,826,578.00; for state school purposes, amounting to \$2,073,413.00; for military fund, amounting to \$197,468.00; for the permanent highway fund, amounting to \$1,481,009.00; for the public highway fund, amounting to \$987,340.00; for the University of Washington, amounting to \$468,396.00; for the Washington State College, amounting to \$320,885.00; for the Cheney State Normal School, amounting to \$88,861.00; for the Bellingham State Normal School, amounting to \$88,861.00; for the Ellensburg State Normal School, amounting to \$69,114.00; making a total of \$7,602,515.00, was levied and apportioned among the several counties of the state as indicated by Schedule E of this report. On motion, Schedule A, showing the returns of personal property, as equalized by the several county boards of equalization; Schedule B, showing the returns of real property, as equalized by the several county boards of equalization; Schedule C, showing the valuation of the operating property of railroads, electric railways and tele-

graph lines as revised, corrected and equalized by this Board; Schedule D, showing total assessment of all taxable property in the State of Washington, and Schedule E, showing the total amount of tax to be paid by each county, having been completed, were fixed and approved as hereinafter appended and are hereby made a part of the proceedings and actions of this Board.

The minutes of the previous meetings of the Board were read, discussed and approved.

There being no further business to come before the Board, on motion, the Board adjourned *sine die*.

C. W. CLAUSEN,

State Auditor and ex-officio Chairman of the Board;

CLARK V. SAVIDGE,

*Commissioner of Public Lands and ex-officio
Secretary of the Board;*

ARTHUR A. LEWIS,

Member Public Service Commission.

SCHEDULES

SCHEDULE "A"—Table I.—Abstract of Assessment of Personal Property in the State of Washington, as Returned by the County Boards for the Year 1916.

COUNTIES		1.—HORSES					
		ONE YEAR OLD			TWO YEARS OLD		
		No.	Value	Average value	No.	Value	Average value
		THREE YEARS OLD AND OVER			WORK HORSES		
		No.	Value	Average value	No.	Value	Average value
		STALLIONS					
		No.	Value	Average value			
1	Adams	1,374	\$18,725	\$13 63	1,230	\$31,215	\$25 38
2	Asotin	554	11,375	20 53	485	12,885	26 56
3	Benton	587	5,820	9 91	570	9,395	16 48
4	Chelan	103	875	8 49	181	1,910	14 58
5	Clallam	122	2,060	16 88	204	4,277	20 96
6	Clarke	459	6,212	13 53	257	5,973	23 24
7	Columbia	789	7,765	9 84	785	11,535	14 69
8	Cowlitz	176	3,361	19 10	145	4,159	28 68
9	Douglas	1,867	19,510	10 45	2,460	38,454	15 63
10	Ferry	267	4,434	16 61	243	6,160	25 35
11	Franklin	363	5,988	16 49	289	7,417	25 66
12	Garfield	971	11,326	11 66	798	13,514	17 04
13	Grant	1,174	21,032	17 92	1,097	25,012	22 80
14	Grays Harbor	170	2,353	13 84	166	3,662	22 06
15	Island	91	2,415	26 53	98	3,570	36 43
16	Jefferson	14	270	19 30	12	335	27 92
17	King	453	9,314	20 56	480	14,472	30 15
18	Kitsap	17	295	17 35	24	575	23 95
19	Kittitas	1,308	19,675	15 04	1,060	25,230	23 80
20	Klickitat	612	9,333	15 28	850	18,075	21 26
21	Lewis	840	16,072	19 13	576	16,167	28 07
22	Lincoln	2,837	49,500	17 45	2,203	52,470	23 82
23	Mason	40	485	12 12	52	811	15 50
24	Okanogan	1,848	15,415	8 34	1,877	30,865	16 18
25	Pacific	65	800	13 69	65	1,272	19 57
26	Pend Oreille	40	588	14 70	50	980	18 60
27	Pierce	196	3,750	19 23	201	5,797	28 84
28	San Juan	63	1,400	22 22	82	2,635	32 13
29	Skagit	225	2,970	13 20	246	5,965	24 12
30	Skamania	2	18	9 00	8	82	10 25
31	Snohomish	154	2,665	17 30	191	4,730	24 76
32	Spokane	1,296	18,610	14 36	1,282	30,950	24 14
33	Stevens	706	7,490	10 61	784	12,330	15 73
34	Thurston	281	5,251	18 69	189	5,086	26 65
35	Wahkiakum	9	160	17 78	8	280	28 75
36	Walla Walla	969	15,273	15 76	926	19,665	21 24
37	Whatcom	287	2,816	11 88	274	4,783	17 48
38	Whitman	3,290	66,380	20 17	3,140	94,230	30 01
39	Yakima	1,704	19,575	11 48	2,021	39,690	19 63
Totals		20,272	\$301,493	\$14 93	25,554	\$545,038	\$22 15
		1,105	\$106,541	\$96 71	154,517	\$7,392,288	\$47 05

Schedule "A"—Table 1.—Continued.

COUNTIES	2				3.—STOCK CATTLE				4			
	MULES AND ASSES				YEARLINGS				TWO YEARS OLD			
	No.	Value	Average value		No.	Value	Average value		No.	Value	Average value	
1 Adams	1,663	\$82,200	\$49 46		2,272	\$25,066	\$11 04		1,654	\$36,345	\$15 98	
2 Asotin	217	8,575	39 51		1,839	28,120	15 29		1,433	28,596	19 96	
3 Benton	202	6,125	30 32		1,796	12,335	6 87		963	10,245	10 75	
4 Chelan	268	18,980	52 16		827	6,240	7 54		452	5,985	13 13	
5 Clallam	42	1,690	40 23		1,366	11,413	8 35		1,052	15,029	14 28	
6 Clarke	104	4,085	38 80		4,061	22,020	5 40		3,087	30,066	9 90	
7 Columbia	1,374	60,175	43 79		1,602	13,195	8 24		1,261	15,205	11 87	
8 Cowlitz	6	280	38 33		1,886	13,026	6 91		1,230	15,508	12 68	
9 Douglas	967	39,324	40 66		2,160	13,790	6 38		1,705	18,758	11 00	
10 Ferry	137	5,518	40 28		1,769	17,469	9 88		1,231	24,226	19 68	
11 Franklin	533	28,470	53 41		423	5,859	13 85		253	5,196	20 54	
12 Garfield	414	13,180	32 62		2,346	18,892	8 04		1,753	21,844	12 46	
13 Grant	561	24,270	41 77		2,589	31,067	12 02		1,954	35,190	18 01	
14 Grays Harbor	9	405	45 00		2,285	13,955	6 11		1,600	15,468	9 66	
15 Island	12	460	38 50		300	2,890	5 72		312	3,240	10 39	
16 Jefferson	2	40	20 00		372	3,602	9 68		177	2,477	14 00	
17 King	422	22,197	52 60		3,826	41,069	10 74		2,619	56,244	20 33	
18 Kitsap	5	165	33 00		673	7,586	11 27		232	3,335	14 37	
19 Kittitas	78	3,890	49 87		7,014	48,575	6 92		2,806	44,910	15 67	
20 Klickitat	278	10,311	37 09		3,235	30,483	9 42		2,257	36,197	16 04	
21 Lewis	69	8,221	46 68		7,313	68,255	9 33		3,917	59,328	15 15	
22 Lincoln	2,025	106,057	52 37		4,404	44,891	10 19		2,829	34,025	12 03	
23 Mason	4	225	56 25		806	6,119	7 59		578	6,383	11 04	
24 Okanogan	401	15,720	39 20		8,887	88,885	10 00		6,329	106,850	16 41	
25 Pacific	2	40	20 00		1,088	5,851	5 38		915	9,187	10 04	
26 Pend Oreille	24	944	39 33		826	6,123	7 41		464	5,472	11 79	
27 Pierce	63	3,430	54 45		2,311	27,446	11 88		1,726	32,861	19 04	
28 San Juan	4	150	37 50		640	3,835	5 99		566	6,043	10 68	
29 Skagit	16	396	24 69		3,829	20,690	5 40		2,799	26,886	9 60	
30 Skamania	26	445	17 11		274	2,780	9 96		201	3,020	15 02	
31 Snohomish	31	1,590	51 30		5,277	36,890	6 99		3,511	45,390	12 93	
32 Spokane	466	22,755	48 83		5,090	31,665	6 22		3,207	36,080	11 25	
33 Stevens	188	5,855	32 00		4,862	36,090	7 74		3,057	36,855	12 06	
34 Thurston	50	2,220	44 40		4,825	31,653	5 56		1,569	21,387	13 63	
35 Wahkiakum	.....	.....	.....		563	5,630	10 00		478	7,170	15 00	
36 Walla Walla	3,450	187,445	54 33		2,465	23,815	9 66		1,706	25,230	14 79	
37 Whitcom	37	1,050	28 38		4,415	18,034	4 08		3,132	23,126	7 38	
38 Whitman	2,131	106,415	49 93		6,182	61,700	9 98		3,241	50,420	15 55	
39 Yakima	386	18,610	48 21		12,939	92,286	7 13		6,141	94,440	15 37	
Totals	16,682	\$801,867	\$48 07		119,657	\$979,223	\$8 18		74,417	\$1,088,272	\$13 95	
									60,807	\$1,182,980	\$19 45	
									191,822	\$4,775,193	\$24 89	

MILCH COWS

THREE YEARS OLD AND OVER

TWO YEARS OLD

YEARLINGS

Schedule "A"—Table 1.—Continued.

COUNTIES	5 BULLS FOR BREED- ING PURPOSES			6 STOCK SHEEP AND GOATS			7 SHEEP BOOKS For Breeding Purposes			9 POUL- TRY			10 DRAIS, TRUCKS, WAGONS AND SLEIGHS		
	No.	Average value		No.	Value		No.	Value		Value	No.	Value		Average value	
		Value			Value			Value				Value			
1 Adams	118	\$2,885	\$24 45	16,880	\$41,306	\$2 50	2,284	\$5,760	\$2 52	\$18,060	1,876	\$27,125	\$16 19	1	
2 Asotin	120	3,385	28 20	13,075	29,455	2 25	59	295	5 00	14,118	571	12,005	22 07	2	
3 Benton	97	2,725	28 10	70,970	158,496	2 28	238	985	4 14	12,465	906	14,200	14 27	3	
4 Chelan	70	2,150	30 71	4,418	8,670	2 01				5,020	1,567	20,685	12 92	4	
5 Clallam	100	2,500	23 01	961	1,808	1 88	6	15	2 50	2,541	1,543	7,909	14 43	5	
6 Clarke	408	6,537	16 02	1,672	2,928	1 30	105	178	1 69	10,592	2,067	20,025	9 83	6	
7 Columbia	114	3,005	25 35	16,614	30,045	1 81	127	680	4 88	8,100	908	14,045	14 14	7	
8 Cowlitz	173	4,550	26 30	796	1,807	2 27	20	61	3 05	4,523	407	5,774	14 19	8	
9 Douglas	92	1,976	21 47	918	1,820	1 99	6	14	2 33	17,485	3,210	36,589	11 40	9	
10 Ferry	39	1,800	33 33	945	813	3 32	15	33	2 17	2,913	717	11,512	16 06	10	
11 Franklin	14	448	32 00	28,949	73,760	2 55	81	492	6 07	7,000	842	6,108	17 86	11	
12 Garfield	120	2,478	20 05	11,901	18,985	1 59	108	482	4 00	15,083	1,082	13,957	13 14	12	
13 Grant	91	2,392	28 29	51,268	111,055	2 17	1,001	2,465	2 46	13,990	1,398	17,870	12 78	13	
14 Grays Harbor	183	3,077	16 92	1,064	1,580	1 41	8	25	3 12	4,605	863	14,846	16 97	14	
15 Island	43	870	20 23	1,417	2,085	1 50				1,625	308	3,180	10 43	15	
16 Jefferson	65	1,785	27 46	328	650	1 08	118	243	2 06	1,064	222	3,451	15 54	16	
17 King	690	34,548	50 09	1,712	7,327	4 63	694	4,677	6 84	29,817	6,365	227,676	36 77	17	
18 Kitsap	72	1,880	28 11	298	465	2 23				2,792	825	11,016	13 35	18	
19 Kittitas	330	9,110	27 61	35,636	36,300	2 42	317	1,300	4 78	12,690	1,873	34,335	19 34	19	
20 Klokittat	137	3,980	28 09	46,915	105,290	2 24	381	1,872	4 91	22,584	1,470	18,544	12 62	20	
21 Lewis	300	7,817	26 05	2,549	4,788	1 83	13	49	3 77	13,851	1,546	29,467	19 06	21	
22 Lincoln	154	4,637	30 11	1,366	4,160	2 06	15	42	2 70	18,786	3,408	51,068	14 72	22	
23 Mason	55	1,088	18 87	302	604	2 00				806	254	2,585	10 17	23	
24 Okanogan	460	16,490	35 09	5,846	14,530	2 83	106	530	5 00	13,055	3,406	47,265	13 86	24	
25 Pacific	123	2,644	21 60	113	1,185	1 64				1,843	366	5,314	14 82	25	
26 Pend Oreille	53	1,130	21 18	120	428	2 26	40	102	2 55	1,402	504	8,683	17 59	26	
27 Pierce	226	8,561	36 06	1,370	5,081	3 69	161	768	5 06	17,240	2,129	55,797	26 22	27	
28 San Juan	81	1,480	18 23	4,810	12,807	2 56	2	15	7 50	1,765	317	8,685	11 63	28	
29 Skagit	366	5,990	15 44	231	445	1 96	497	870	7 79	3,620	1,241	14,890	11 99	29	
30 Skamania	29	490	21 30	68	90	1 36	4	8	2 00	773	243	10,849	43 82	30	
31 Shoshone	551	11,610	27 07	342	990	2 80	69	205	3 02	3,270	2,845	36,065	14 06	31	
32 Spokane	372	8,735	23 61	744	1,700	2 36	115	985	8 13	29,506	5,678	106,510	18 59	32	
33 Stevens	320	3,982	12 44	6,009	15,023	2 50				12,470	1,889	29,977	16 12	33	
34 Thurston	250	5,954	23 82	1,517	3,038	1 98	13	27	2 06	7,245	1,068	16,138	13 86	34	
35 Wahkiakum	101	2,800	23 37	62	65	1 25				1,129	151	1,654	12 94	35	
36 Walla Walla	182	4,455	24 48	25,332	64,497	2 49	127	745	5 87	19,843	2,432	26,635	14 65	36	
37 Whatcom	485	5,612	11 57	1,046	1,322	1 22				4,904	1,934	18,272	12 16	37	
38 Whitman	238	6,150	26 30	14,239	28,275	2 84				86,745	4,111	70,680	17 17	38	
39 Yallum	476	14,645	30 76	121,234	272,765	2 25	1,907	9,000	4 72	62,490	5,060	78,845	14 09	39	
Totals	7,917	\$606,320	\$23 53	422,678	\$1,130,731	\$3 27	8,574	\$632,613	\$3 78	\$609,101	15,067	\$1,135,100	\$17 28		

Proceedings State Board of Equalization, 1910

Schedule "A"—Table 1.—Continued.

COUNTIES	11			12			13			14			15		
	CARRIAGES, HACKS, BUGGIES, CUTTERS			BICYCLES			MOTORBOYLES			AUTOMOBILES			WATCHES		
	No.	Value	Average value	No.	Value	Average value	No.	Value	Average value	No.	Value	Average value	No.	Value	Average value
1 Adams	824	\$13,085	\$15.88	3	\$15	\$5.00	3	\$150	\$50.00	549	\$102,010	\$185.15	324	\$1,725	\$5.32
2 Asotin	355	6,179	17.40	27	200	7.40	7	420	60.00	185	42,000	227.51	141	1,100	8.22
3 Benton	555	5,315	10.43	26	155	5.13	14	555	40.35	210	37,000	179.28	279	1,555	5.55
4 Chelan	824	9,845	11.80	29	205	7.00	5	240	48.00	535	80,975	150.51	321	1,505	5.30
5 Clallam	298	3,341	11.40	13	71	5.91	16	555	41.55	267	43,973	164.71	234	1,350	5.76
6 Clarke	1,577	12,130	8.81	150	625	4.16	19	700	36.84	543	83,705	154.23	549	3,025	5.59
7 Columbia	577	6,160	10.67	24	165	6.87	5	425	85.00	300	61,435	204.78	147	825	5.61
8 Cowlitz	264	3,420	12.99	1	5	5.00	...	...	...	92	16,305	178.21	23	182	7.91
9 Douglas	1,287	12,844	9.93	43	190	4.03	...	...	...	453	31,654	169.08	277	1,208	4.35
10 Ferry	311	4,943	15.90	...	...	...	11	420	38.18	453	31,654	169.08	277	1,208	4.35
11 Franklin	160	2,658	16.61	23	172	7.49	1	100	100.00	73	16,353	225.15	12	102	8.50
12 Garfield	589	5,558	10.31	5	24	4.80	4	303	77.00	90	17,270	191.89	172	1,208	7.08
13 Grant	689	8,145	11.82	22	110	5.00	7	323	46.86	280	50,544	180.82	241	1,105	4.59
14 Grays Harbor	324	2,947	9.10	213	1,003	5.01	39	3,112	34.97	352	160,543	183.43	200	880	4.40
15 Island	188	1,765	9.40	6	35	5.83	6	330	55.33	123	13,970	150.66	1,347	8,300	6.16
16 Jefferson	90	1,170	13.00	6	70	11.66	11	570	51.82	102	33,575	207.25	32	165	7.50
17 King	1,572	45,714	29.08	170	1,700	10.00	504	30,053	59.68	9,513	2,877,302	302.45	8,055	110,092	14.41
18 Kitsap	325	3,640	11.20	21	175	8.33	3	90	30.00	209	31,075	149.68	230	2,455	11.16
19 Kittitas	930	15,655	16.83	67	535	8.89	42	2,170	51.65	522	119,540	229.00	409	3,070	7.50
20 Klickitat	1,045	11,439	10.95	44	345	7.84	21	1,241	59.12	305	61,914	205.00	613	2,932	4.82
21 Lewis	743	13,697	18.43	267	2,000	7.49	67	3,500	52.24	617	182,801	215.24	1,076	9,801	9.18
22 Lincoln	1,603	21,513	13.38	16	113	7.06	14	557	41.41	1,100	275,853	237.51	497	1,523	3.07
23 Mason	152	1,457	9.58	16	82	5.46	13	515	39.61	112	24,233	216.36	102	637	6.24
24 Okanogan	1,535	21,845	14.31	16	45	5.62	3	185	65.00	237	46,500	195.80	82	735	9.30
25 Pacific	133	1,749	13.15	12	90	7.50	5	275	55.00	170	31,532	185.47	101	580	5.79
26 Pend Oreille	238	2,739	11.51	12	70	5.83	3	115	38.33	80	10,949	135.50	245	1,573	4.53
27 Pierce	914	19,436	21.26	453	4,085	9.43	605	37,672	62.27	3,393	1,203,270	356.23	6,860	79,927	11.62
28 San Juan	223	2,555	11.25	1	5	5.00	...	...	...	45	9,630	215.33	20	190	9.50
29 Shaglit	418	5,065	12.09	4	50	12.50	14	680	45.00	707	82,165	109.54	4	25	6.25
30 Skamania	120	922	8.27	...	...	...	...	...	...	17	2,715	159.71	114	547	4.80
31 Snohomish	1,146	13,745	12.00	196	1,390	7.05	126	6,236	49.06	1,039	410,395	250.39	1,619	16,096	9.95
32 Spokane	2,534	43,695	12.36	1,123	9,085	8.04	538	31,230	53.95	4,683	1,175,640	233.75	10,423	62,280	5.84

Schedule "A"—Table I.—Continued.

COUNTIES	16			17			18	19			20	21	22
	ORGANS AND MELODEONS			PIANOS, AUTOMATIC AND ELECTRIC PIANOS AND ORCHESTRIONS			Band instruments, violins, phonographs and music boxes	SEWING MACHINES			Household furniture, including clocks, rugs, gold and silver plate, etc.	Libraries, books, scientific instruments, etc.	Office furniture, safes, typewriters, etc.
	No.	Value	Average value	No.	Value	Average value		No.	Value	Average value			
1 Adams	156	\$1,025	\$10 42	239	\$20,175	\$87 47	\$980	737	\$4,685	\$6 37	\$49,985	\$4,925	\$3,465
2 Asotin	64	955	14 92	231	22,460	97 22	1,260	347	3,080	8 87	52,580	3,875	4,120
3 Benton	90	1,120	12 44	841	19,635	57 58	1,395	691	4,045	5 85	52,455	3,225	17,020
4 Chelan	46	505	10 97	611	33,982	55 61	810	522	3,353	6 42	84,132	5,055	10,617
5 Clallam	53	940	17 74	429	27,773	64 73	1,479	511	3,366	6 58	48,072	2,589	5,302
6 Clarke	557	3,987	7 16	1,168	65,870	55 97	5,465	2,759	15,840	5 74	188,647	17,087	12,948
7 Columbia	59	670	11 35	309	14,580	47 18	890	521	2,855	5 48	48,980	1,995	3,200
8 Cowlitz	64	1,055	16 48	135	9,340	69 19	468	319	2,321	7 27	27,796	1,955	2,055
9 Douglas	209	1,976	9 45	390	23,482	60 21	1,974	1,018	4,706	4 62	50,346	2,706	4,284
10 Ferry	6	65	10 88	119	9,708	81 58	165	145	983	6 85	22,812	4,247	5,025
11 Franklin	10	120	12 00	155	11,982	77 30	390	260	2,360	9 08	29,204	2,697	5,452
12 Garfield	87	658	7 57	187	10,240	54 76	1,028	355	2,074	5 84	28,122	2,654	4,140
13 Grant	125	1,270	10 16	294	15,615	53 12	1,898	776	4,562	5 88	44,708	4,552	5,860
14 Grays Harbor	174	2,192	12 60	1,217	64,688	53 15	7,065	1,794	11,168	6 22	203,833	42,087	78,293
15 Island	62	590	9 51	126	8,750	69 44	310	191	1,370	7 18	16,570	975	100
16 Jefferson	25	550	22 00	149	10,850	73 32	531	216	1,882	8 71	27,950	2,245	3,470
17 King	1,726	40,681	23 57	16,554	1,775,135	107 23	105,777	23,988	268,849	11 21	5,580,887	324,065	839,120
18 Kittitas	123	1,395	11 34	379	26,185	69 06	2,135	988	7,250	7 73	66,540	3,520	6,180
19 Kittitas	100	1,575	15 75	679	68,010	92 80	2,195	1,156	10,160	8 79	158,715	12,300	15,190
20 Klickitat	237	2,744	11 58	380	23,498	61 84	1,988	1,123	6,375	5 68	71,587	3,450	4,791
21 Lewis	523	8,344	15 80	1,122	107,009	95 37	4,866	2,920	25,989	8 90	275,155	9,242	16,604
22 Lincoln	217	2,765	12 74	739	55,675	75 34	1,788	1,374	8,782	6 39	123,620	6,547	8,579
23 Mason	73	805	11 08	154	9,029	58 08	858	412	2,250	5 46	20,084	2,923	1,660
24 Okanogan	139	1,795	12 91	523	36,530	69 85	2,555	1,418	10,485	7 39	98,945	9,405	6,155
25 Pacific	30	490	16 33	215	13,655	63 51	1,585	219	1,244	5 68	46,488	6,475	11,912
26 Pend Oreille	78	602	7 71	164	10,992	67 02	852	468	2,846	6 08	32,272	2,502	2,888
27 Pierce	1,258	31,167	24 78	8,160	894,253	109 59	47,524	15,681	160,126	10 21	2,358,721	90,920	807,161
28 San Juan	40	6,455	161 88	151	13,230	88 01	540	164	1,215	7 41	20,105	1,200	3,535
29 Skagit	30	285	9 50	453	22,230	49 08	230	368	1,685	4 71	78,510	2,680	3,000
30 Skamania	23	149	6 48	55	2,635	47 91	159	160	742	4 64	7,837	270	435
31 Snohomish	474	7,865	16 60	2,829	244,236	86 35	17,795	4,721	42,740	9 05	646,080	31,610	106,800
32 Spokane	2,425	24,265	10 01	10,101	954,540	94 50	89,475	19,401	161,150	8 30	3,572,290	112,985	861,290
33 Stevens	286	2,205	7 71	610	23,397	38 36	2,012	2,075	7,548	3 64	80,247	4,550	8,552
34 Thurston	275	3,889	13 90	899	72,056	82 92	6,785	1,310	16,689	12 74	216,897	16,167	12,702
35 Wahkiakum	13	130	10 00	55	2,720	49 45	185	113	761	6 73	5,745	90	1,675
36 Walla Walla	66	1,193	18 34	972	69,587	71 57	2,407	885	5,843	6 61	188,970	10,288	24,940
37 Whitcom .....	.....	.....	.....	1,557	60,712	38 80	3,028	1,880	7,568	4 07	143,292	10,002	36,206
38 Yakima	646	16,085	24 82	1,507	154,080	102 20	6,395	3,160	30,950	9 79	407,530	17,780	24,745
39 Totals	11,102	\$177,517	\$10 02	50,060	\$5,152,578	\$40 47	\$357,579	100,303	\$383,672	\$8 51	\$15,775,504	\$310,405	\$2,091,431

Schedule "A"—Table 1.—Continued.

COUNTIES		23	24	25	26	27	28	29	30	31	32	33
		Diamonds, jewelry, firearms, clothing, etc.	Agricultural implements, machinery and harness	Mechanics' tools and implements	Royalties and patent rights, annuities, etc.	Thrashing machines, hay presses, traction engines, etc.	Donkey and logging engines, etc.	Steamboats, sailing vessels, launches, dredges, etc.	Lumber	Saw logs	Shingles and lath	Sash, doors, mouldings, pillars, etc.
1	Adams	\$2,410	\$88,115	\$5,976	.....	\$59,195	\$2,506	.....	\$12,745	.....	\$380	\$500
2	Asotin	1,162	27,436	9,982	.....	16,895	2,895	\$770	6,005	\$115	.....	.....
3	Benton	4,300	29,535	3,030	\$225	5,985	1,475	3,095	10,555	260	720	505
4	Chelan	1,715	35,375	3,149	.....	3,935	1,570	8,130	12,185	21,010	515	940
5	Clallam	1,097	10,013	5,833	.....	1,677	48,465	12,715	35,592	5,250	1,280	1,362
6	Clarke	4,007	40,782	16,835	15	11,065	54,862	30,283	8,802	2,410	1,545	535
7	Columbia	885	85,895	3,820	.....	33,805	.....	.....	4,195	10	440	345
8	Cowlitz	254	14,736	4,976	150	2,475	138,055	19,269	350	87,920	2,262	.....
9	Douglas	1,344	76,974	2,984	.....	55,364	4,526	3,814	794	.....	54	160
10	Ferry	430	17,528	2,683	.....	3,725	80	1,040	8,520	.....	.....	.....
11	Franklin	333	12,347	4,804	.....	7,167	1,025	2,867	.....	675	.....	.....
12	Garfield	2,994	71,873	4,226	20	6,838	54	678	498	.....	77	471
13	Grant	1,568	49,195	5,235	147	26,853	4,142	525	12,518	115	667	1,240
14	Grays Harbor	19,055	12,727	19,745	420	2,720	469,185	107,115	312,345	125,330	32,900	8,130
15	Island	380	7,475	925	.....	4,700	5,950	7,780	350	11,215	100	.....
16	Jefferson	685	4,418	1,115	55	535	46,190	34,995	1,000	7,200	550	.....
17	King	233,392	74,324	125,672	712,975	62,220	386,028	1,897,440	432,154	85,975	24,745	24,275
18	Kitsap	1,240	11,886	2,890	10	2,070	7,120	131,788	20,605	11,070	1,820	1,740
19	Kittitas	6,140	70,170	5,970	.....	31,980	9,600	1,080	10,200	48,295	270	775
20	Klickitat	4,454	44,306	3,273	.....	15,460	3,142	817	13,336	3,364	195	190
21	Lewis	5,321	73,324	10,838	59	17,000	122,603	200	66,906	3,412	5,625	170
22	Lincoln	4,899	154,086	16,280	917	117,620	8,030	1,955	515	.....	.....	15,718
23	Mason	1,689	6,172	1,859	.....	1,238	102,807	21,151	875	9,114	1,869	.....
24	Okanogan	3,240	84,990	8,600	.....	21,740	3,690	4,510	8,845	1,420	1,175	2,630
25	Pacific	3,422	5,962	2,770	.....	450	107,397	62,625	112,760	15,792	5,658	252
26	Pend Oreille	2,787	10,011	1,260	290	2,888	813	2,932	168,189	21,859	1,267	105
27	Pierce	86,474	58,998	88,507	10,235	14,820	118,345	255,209	235,456	43,522	15,120	55,287
28	San Juan	620	8,750	715	.....	4,535	8,210	45,710	140	.....	.....	.....
29	Skagit	55	29,780	7,315	.....	11,215	7,750	14,080	670	.....	60	3,230
30	Skamania	780	2,501	727	.....	800	75,265	6,410	135	10,000	.....	.....
31	Snahomish	15,205	58,880	54,675	100	6,500	431,470	48,570	332,545	72,430	41,395	6,585
32	Spokane	101,325	166,520	59,270	970	108,445	27,100	6,915	179,065	32,555	5,230	13,070
33	Stevens	3,642	40,080	9,158	5	12,142	3,708	2,245	25,585	51,962	435	50
34	Thurston	9,701	28,048	13,909	366	5,063	48,991	23,001	16,908	7,385	2,388	.....
35	Wahkiakum	100	4,086	2,300	.....	480	82,950	23,780	.....	1,870	2,250	.....
36	Walla Walla	6,313	91,370	9,705	.....	72,833	2,187	760	25,228	.....	590	16,910
37	Whatcom	3,890	29,210	20,310	380	.....	54,208	157,050	76,892	28,262	12,240	.....
38	Whitman	6,115	226,480	17,490	.....	101,820	33,605	550	.....	.....	.....	.....
39	Yakima	35,320	155,610	16,025	125	28,400	9,050	2,850	57,815	16,495	3,810	9,620
Totals.....		\$578,553	\$1,956,673	\$572,503	\$727,404	\$382,198	\$2,435,003	\$2,944,709	\$2,211,328	\$676,242	\$167,682	\$164,855

Schedule "A"—Table I.—Continued.

COUNTIES	34	35	36	37	38	39	40	41	42	43	44
	Wood, coal, wool, hides, etc.	Goods and merchandise, including fixtures and appliances	Manufacturers' materials, manufactured articles, etc.	Manufacturers' tools, implements, machinery, etc.	Theatre furniture and motion picture machines	Capital stock of incorporated banks	Money	Stock and fixtures of billiard and pool rooms, etc.	Furniture and fixtures of hotels, restaurants, lodging houses	Hay, grain and other farm products in hands of producers	Hay, grain and farm products in warehouse, elevator or cold storage
1 Adams	\$980	\$184,650	\$10,075	\$4,730	\$500	\$126,170	.....	\$2,925	\$3,065	\$11,415	\$336,965
2 Asotin	60	78,705	.....	8,450	500	36,300	.....	740	9,530	56,410	68,255
3 Benton	2,325	118,735	4,365	115	1,475	70,150	.....	4,010	7,275	14,720	25,405
4 Chelan	440	409,780	61,680	68,400	1,705	101,420	\$685	12,817	16,728	3,365	23,558
5 Clallam	775	94,502	1,175	147,840	1,300	22,782	.....	2,070	25,136	.....	.....
6 Clarke	2,508	261,080	22,170	462,065	3,100	70,437	15,350	3,180	11,028	770	150
7 Columbia	355	115,915	70	4,825	300	152,355	.....	845	1,265	.....	.....
8 Cowlitz	3,250	117,662	1,000	180,423	.....	15,502	.....	1,470	2,580	515	367,238
9 Douglas	.....	163,476	2,602	3,300	400	70,104	.....	2,534	1,610	500	.....
10 Ferry	.....	82,326	1,375	108,780	.....	22,525	1,190	755	2,600	26,560	400,205
11 Franklin	.....	73,332	1,350	1,100	1,000	47,523	.....	1,225	6,500	2,090	1,196
12 Garfield	454	89,357	557	400	30	57,637	.....	560	1,220	1,651	124,922
13 Grant	2,720	153,960	1,928	1,615	290	63,350	25,680	3,907	6,733	13,217	211,066
14 Grays Harbor	733	529,822	6,470	1,197,845	3,235	263,095	202	6,475	51,585	8,610	268,408
15 Island	.....	30,825	.....	11,425	.....	14,550	.....	255	770	1,230	5,700
16 Jefferson	60	68,620	6,000	81,738	.....	41,667	.....	2,065	3,300	160	1,085
17 King	51,715	10,013,495	402,014	2,309,730	18,900	4,288,314	88,110	71,104	578,045	31,710	5,340
18 Kitsap	895	133,725	14,215	166,360	1,475	67,508	50	1,995	5,040	.....	.....
19 Kittitas	29,615	307,355	22,250	108,865	2,480	105,345	.....	3,770	18,665	86,085	51,505
20 Klickitat	126	134,015	1,113	59,174	1,448	86,400	.....	2,046	3,705	8,825	86,784
21 Lewis	275	418,704	10,964	275,604	4,880	198,689	.....	4,565	21,036	13,625	4,875
22 Lincoln	2,092	413,217	10,500	23,565	1,738	223,441	1,050	2,075	4,004	41,578	1,251,578
23 Mason	100	53,965	320	17,326	50	18,250	.....	87	3,308	.....	.....
24 Okanogan	350	212,370	3,770	54,400	945	183,050	.....	2,220	12,575	13,610	7,970
25 Pacific	127	169,454	5,127	307,948	1,075	90,479	354	10,130	10,950	152	1,100
26 Pend Oreille	3,810	52,462	38,788	36,055	137	21,460	977	665	2,610	4,367	1,225
27 Pierce	31,240	3,388,984	181,968	1,804,315	24,780	1,068,414	16,405	28,035	238,440	4,011	440,985
28 San Juan	225	66,676	4,185	45,760	.....	19,400	1,400	1,395	1,910	500	.....
29 Skagit	310	259,090	2,805	689,320	2,080	132,150	.....	5,850	7,050	4,805	4,400
30 Skamania	1,337	21,683	150	11,200	.....	1,270	250	560	2,150	.....	.....
31 Snohomish	23,680	1,142,305	40,865	1,090,000	11,475	306,690	780	13,730	63,680	1,855	20,050
32 Spokane	57,170	5,316,400	202,870	444,475	9,380	1,006,345	19,115	33,290	309,665	60,120	152,525
33 Stevens	1,455	159,493	7,575	75,282	288	79,300	.....	3,535	5,057	8,030	3,798
34 Thurston	2,057	262,557	22,805	270,084	.....	124,500	.....	6,075	22,215	225	8
35 Wahkiakum	580	23,750	41,700	20,530	40	1,600	.....	820	970	.....	.....
36 Walla Walla	20,080	647,442	44,270	43,987	1,725	687,203	.....	8,085	19,545	10,967	672,311
37 Whatcom	252	724,168	342,004	447,036	7,732	283,318	1,208	7,256	27,490	190	740,910
38 Whitman	.....	795,070	.....	.....	.....	636,194	.....	6,370	26,780	.....	133,530
39 Yakima	16,960	667,045	14,245	16,045	3,440	314,840	.....	9,525	43,445	688,665	.....
Totals	\$250,001	\$23,176,027	\$1,522,165	\$10,530,302	\$108,913	\$12,120,820	\$172,850	\$208,330	\$1,094,353	\$513,315	\$5,101,421

Schedule "A"—Table 1.—Concluded.

COUNTIES							TOTALS			
45	46	47	48	49	50	51	Aggregate value personal property, as equalized by county board	Aggregate value of exemptions	Aggregate value taxable personal property, equalized by county board	
Adams	\$51,025	\$70,455	.....	.....	\$7,690	\$1,325	\$2,105,705	\$189,820	\$1,915,945
Asotin	50	63,500	.....	.....	1,400	1,480	911,970	90,750	821,220
Benton	9,070	108,610	.....	.....	.....	14,895	1,004,520	184,995	819,525
Chelan	55,245	236,865	.....	.....	.....	9,200	1,636,455	237,812	1,398,643
Clallam	.....	130,775	.....	.....	.....	18,200	965,073	155,016	810,057
Clarke	10,815	242,700	.....	.....	.....	44,348	2,207,067	582,410	1,624,657
Columbia	18,445	73,735	.....	.....	.....	5,895	1,383,493	148,260	1,235,233
Cowlitz	3,375	82,997	.....	.....	.....	21,076	909,059	145,200	763,859
Douglas	30,946	56,168	.....	.....	.....	4,454	1,751,141	220,448	1,530,693
Ferry	3,015	28,963	.....	.....	.....	8,420	616,756	86,681	530,075
Franklin	20,050	72,566	.....	.....	.....	682	731,184	98,828	637,356
Garfield	13,269	27,350	.....	.....	.....	80	1,000,417	68,460	931,957
Grant	26,262	87,794	.....	.....	.....	10,453	1,640,286	230,452	1,409,834
Grays Harbor	54,065	324,635	.....	.....	.....	.....	4,539,295	582,895	8,956,400
Island	.....	7,070	.....	.....	.....	.....	349,200	139,340	209,860
Jefferson	.....	75,398	.....	.....	.....	720	622,557	52,526	570,031
King	7,270	3,550,527	.....	.....	.....	27,975	40,808,116	7,788,560	33,019,556
Kitsap	4,360	199,440	.....	.....	.....	30,629	1,158,876	286,467	872,409
Kittitas	53,525	119,665	.....	.....	.....	50,771	2,225,005	255,150	1,969,855
Klickitat	13,435	443,513	.....	.....	.....	30,700	1,768,880	232,829	1,536,061
Lewis	8,910	151,785	.....	.....	.....	38,498	3,054,110	1,031,181	2,022,929
Lincoln	67,610	472,233	.....	.....	.....	97,084	4,725,404	367,311	4,358,093
Mason	.....	15,614	.....	.....	.....	847	515,744	84,710	431,034
Okanogan	10,335	65,740	.....	.....	.....	41,018	1,981,495	413,355	1,568,140
Pacific	8,950	91,947	.....	.....	.....	10,415	1,574,562	78,600	1,495,962
Pend Oreille	300	36,358	.....	.....	.....	99,363	665,597	91,136	574,461
Pierce	105,820	4,026,412	.....	.....	.....	48,080	18,807,775	4,184,064	14,623,711
San Juan	.....	13,100	.....	.....	.....	132,337	496,478	151,418	345,060
Skagit	120	148,215	.....	.....	.....	8,460	1,901,315	186,640	1,715,675
Skamania	2,325	185,501	.....	.....	.....	1,190	405,961	30,529	375,432
Snohomish	21,065	867,355	.....	.....	.....	2,598	7,082,365	1,557,065	5,525,300
Spokane	108,905	3,178,865	.....	.....	.....	30,965	20,610,195	5,619,395	14,990,800
Stevens	2,500	329,555	.....	.....	.....	29,800	1,612,834	429,665	1,183,169
Thurston	500	126,739	.....	.....	.....	95,192	2,168,188	609,194	1,558,994
Wahkiakum	750	2,460	.....	.....	.....	194,800	417,865	55,899	361,976
Walla Walla	66,075	223,070	.....	.....	.....	99,075	4,351,802	270,600	4,081,202
Whatcom	82,818	244,264	.....	.....	.....	44,500	4,200,273	368,640	3,831,633
Whitman	134,300	192,466	.....	.....	.....	61,308	6,012,880	1,408,850	4,606,010
Yakima	68,515	643,050	.....	.....	.....	16,210	5,601,135	1,183,095	4,418,040
Totals	\$1,064,450	\$17,064,764	\$858,420	\$1,392,459	\$465,542	\$1,357,513	\$154,521,083	\$29,890,236	\$124,630,847	

SCHEDULE "A"—Table II.

Abstract of Assessment of All Personal Property in the State of Washington for the Year 1916.

No. of Item	DESCRIPTION OF PROPERTY	Number	Value	Average value
1	Horses: { One year old.....	28,272	\$391,466	\$14 90
	{ Two years old.....	25,554	565,938	22 15
	{ Three years old and over.....	44,804	1,325,816	29 59
	{ Work horses	156,547	7,302,288	46 65
	{ Stallions	1,105	166,541	150 71
2	Mules and Asses.....	16,682	801,867	48 07
3	Stock Cattle: { Yearlings	119,657	979,223	8 18
	{ Two years old.....	74,417	1,038,272	13 95
	{ Three years old and over.....	60,807	1,182,980	19 45
4	Milk Cows	191,822	4,775,198	24 89
5	Bulls, kept for breeding purposes.....	7,917	205,320	25 93
6	Stock Sheep and Goats.....	493,578	1,120,731	2 27
7	Sheep—Bucks kept for breeding purposes.....	8,574	32,413	3 78
8	Hogs	156,338	509,101	3 26
9	Poultry		397,862	.....
10	Drays, Trucks, Wagons and Sleighs.....	65,667	1,135,160	17 28
11	Carriages, Cabs, Hacks, Buggies and Cutters...	33,075	450,242	13 61
12	Bicycles	3,670	27,100	7 38
13	Motorcycles	2,574	146,379	56 87
14	Automobiles	35,794	8,876,775	246 00
15	Watches	39,796	384,075	9 65
16	Organs and Melodeons.....	11,102	177,817	16 02
17	Pianos, Automatic and Electric Pianos and Orchestrions	56,959	5,152,878	90 47
18	Band Instruments, Violins, Phonographs and Musical Boxes		337,579	.....
19	Sewing Machines	100,306	883,672	8 81
20	Household Furniture, including clocks, rugs, gold and silver plate, paintings, statuary, engravings, etc.		15,775,594	.....
21	Libraries, Books, Scientific Instruments, etc....		816,406	.....
22	Office Furniture, Safes, Typewriters, Adding Machines, Cash Registers, etc.....		2,004,481	.....
23	Diamonds, Jewelry, Firearms, Clothing, etc....		578,553	.....
24	Agricultural Implements, Machinery and Harness		1,956,673	.....
25	Mechanics' Tools and Implements.....		572,508	.....
26	Royalties, Patent Rights, Annuities, etc.....		727,404	.....
27	Threshing Machines, Hay Presses, Traction Engines, etc.		882,198	.....
28	Donkey and Logging Engines, Pile Drivers,, Hoisting Engines, etc.....		2,435,008	.....
29	Steamboats, Sailing Vessels, Launches, Dredges, Barges, Ferries, Row Boats, etc.....		2,944,709	.....
30	Lumber		2,211,328	.....
31	Saw Logs		676,242	.....
32	Shingles and Lath.....		167,682	.....
33	Sash, Doors, Mouldings, Pillars, Finishing Lumber, etc.		164,355	.....
34	Wood, Coal, Wool, Hides, etc.....		259,061	.....
35	Goods and Merchandise, including fixtures and appliances used in business.....		28,176,627	.....
36	Manufacturers' Materials and Manufactured Articles, including brick, stone, building material, etc.		1,529,165	.....
37	Manufacturers' Tools, Implements and Ma- chinery, including engines and boilers.....		10,589,362	.....
38	Theatre Furniture and Motion Picture Machines.		108,913	.....
39	Capital Stock of Incorporated Banks.....		12,129,886	.....
40	Money		172,856	.....

Schedule "A"—Table II.—Concluded.

No. of Item	DESCRIPTION OF PROPERTY	Number	Value	Average value
41	Stock and Fixtures of Billiard and Pool Rooms, Bowling Alleys, etc.....		\$268,396	.....
42	Furniture and Fixtures of Hotels, Restaurants, Lodging Houses		1,684,353	.....
43	Hay, Grain and other farm products in hands of producers		513,315	.....
44	Hay, Grain and other farm products in ware- house, elevator or cold storage.....		5,461,621	.....
45	Elevators, Warehouses, or other improvements on lands, the title of which is vested in any railroad company, or other person, firm or corporation		1,064,450	.....
46	Improvements on lands held under the laws of the United States, or leased from the state....		1,143,872	.....
47	Property of Gas, Electric Light, Power, Water, Telephone and other public service concerns, including franchises		17,064,764	.....
48	Fish Traps and Locations.....		868,420	.....
49	Value of timber held separately from land.....		1,392,459	.....
50	Leaseholds		465,542	.....
51	All other items of personal property.....		1,357,818	.....
	Aggregate value of personal property as equalized by county boards.....		\$154,521,063	.....
	Aggregate value of exemptions under sec- tion 5 of Law.....		29,890,236	.....
	Aggregate value of taxable property as equalized		\$124,630,847	.....

**SCHEDULE "B"—Abstract of Assessment of Real Property in the
State of Washington, as Returned by the County Boards for the
Year 1916.**

COUNTIES		Total number of acres of land, ex- clusive of town and city lots						
1	Adams	1,108,827	1,041,492	228,998	814,441			
2	Asotin	238,399	191,300	169,215				
3	Benton	798,098		766,309				
4	Chelan	549,384	89,040	42,100	457,409			
5	Clallam	581,067	18,522	299,473	123,679			
6	Clarke	367,478	160,000	21,840	278,707			
7	Columbia	356,869			173,194			
8	Cowlitz	622,022	58,597	260,180	345,961			
9	Douglas	917,247	744,387	408,587				
10	Ferry	155,427	48,166	60,102 (a)	81,242	14,088		
11	Franklin	669,540	450,968	339,720	329,820			
12	Garfield	324,382	324,382	173,482	150,900			
13	Grant	1,405,940	731,395	985,316	470,624			
14	Grays Harbor	819,963		456,367	340,598	23,010		
15	Island	190,125	13,600	17,850	90,975	11,300		
16	Jefferson	280,265	7,200	172,068	100,890 (b)	7,342		
17	King	625,178		308,382	452,428	64,808		
18	Kitsap	224,038	24,248	40,449	171,589	12,058		
19	Kittitas	819,150	195,924	236,275	428,627 (c)	84,248		
20	Klickitat	919,928	399,509	224,162	512,778	182,998		
21	Lewis	961,602	98,290	447,722	451,579	62,391		
22	Lincoln	1,328,710	1,312,000	542,069	784,651			
23	Mason	409,585		167,638	231,548 (d)	10,309		
24	Okanogan	574,224	316,549	62,167	391,086	121,081		
25	Pacific	526,578		322,608	179,888 (e)	24,087		
26	Pend Oreille	473,169	26,495	298,302	139,021	15,785		
27	Pierce	660,415		313,002	296,774	51,689		
28	San Juan	105,011	61,250	91,011	14,000			
29	Shagit	556,699		242,199	232,088	62,312		
30	Skamania	228,844	9,321	200,064	23,325	5,455		
31	Snohomish	600,173	49,640	158,586	398,180	38,407		
32	Spokane	994,579	557,243	78,667	540,551 (f)	375,641		
33	Stevens	1,029,506	180,240	210,375	721,131	66,000		
34	Thurston	418,598		178,319	213,383	27,984		
35	Wahkiakum	150,525	7,250	68,776	87,899	4,050		
36	Walla Walla	751,336	714,130		232,261	519,075		
37	Whatcom	406,424	77,850	100,457	247,425	55,542		
38	Whitman	1,247,947	1,241,131		292,997	955,080		
39	Yakima	748,780			604,256	144,524		
Totals		24,173,864	9,140,294	5,128,220	12,539,879	6,485,755		

(a) Includes 5,275 acres of mining land.

(b) Includes 2,512 acres of oyster land.

(c) Includes 6,861 acres of coal land.

(d) Includes 3,123.50 acres of oyster land.

(e) Includes 15,824.44 acres of oyster and tide land.

(f) Includes 6,329.39 acres of railroad right-of-way not in operation.

Schedule "B"—Continued.

COUNTIES		Valuation of timber lands as equalized by county boards		Valuation of other unimproved lands as equalized by county boards		Valuation of improved lands as equalized by county boards	
		Average value per acre	Total value	Average value per acre	Total value	Average value per acre	Total value
1	Adams			\$1 91	\$552,925	\$10 10	\$8,223,230
2	Asotin			3 00	447,645	22 37	1,995,685
3	Benton			4 43	3,397,005	60 74	1,663,075
4	Chelan	\$4 30	\$202,080	2 13	976,850	132 52	6,609,386
5	Clallam	23 14	9,013,425	7 44	919,970	30 88	552,065
6	Clarke	31 64	691,089	9 91	2,761,931	42 07	2,815,820
7	Columbia			2 59	458,950	22 85	4,140,160
8	Cowlitz	15 66	4,073,949	3 30	1,140,461	28 23	465,298
9	Douglas			3 18	1,299,125	11 93	6,071,025
10	Ferry	5 75	345,872	9 94 (g)	807,691	15 52 (h)	224,562
11	Franklin			3 29	1,119,054	5 81	1,915,698
12	Garfield			2 94	510,090	16 22	2,448,020
13	Grant			2 59	2,420,100	9 96	4,688,670
14	Grays Harbor...	31 90	14,557,396	4 85	1,652,985	52 38	1,205,254
15	Island	21 08	376,240	7 52	684,132	36 61	413,713
16	Jefferson	19 48	3,353,840	6 69	674,760	34 93 (i)	256,472
17	King	19 09	5,887,390	21 57	9,761,023	184 78	11,892,682
18	Kitsap	20 34	822,775	13 16	2,258,266	31 56	380,425
19	Kittitas	3 54	1,048,814	2 33	1,044,961	57 13 (j)	4,798,900
20	Klickitat	7 09	1,588,346	3 43	1,759,233	15 98	2,923,504
21	Lewis	16 68	7,469,705	4 76	2,147,726	31 10	1,940,080
22	Lincoln			2 01	1,089,420	16 70 (k)	13,107,896
23	Mason	20 29	3,401,965	3 70	856,015	18 38 (l)	191,210
24	Okanogan	3 52	218,990	4 33	1,713,180	16 35	1,979,065
25	Pacific	19 72	6,361,039	7 14	1,283,993	18 57 (m)	447,262
26	Pend Oreille	6 44	1,919,955	3 70	588,377	15 70	247,797
27	Pierce	23 21	7,263,815	11 85	3,508,970	115 65	5,971,896
28	San Juan			3 93	357,495	25 00	350,000
29	Skagit	12 78	3,094,385	5 61	1,413,420	47 21	2,941,980
30	Skamania	10 51	2,102,922	22 51	524,953	33 93	185,090
31	Snohomish	27 96	4,434,000	13 63	4,951,955	52 23	2,008,080
32	Spokane	5 62	442,455	4 48	2,424,870	22 65 (n)	8,521,950
33	Stevens	4 49	945,520	3 17	2,315,520	15 86	1,395,912
34	Thurston	18 92	3,373,961	6 78	1,439,042	24 03	670,872
35	Wahkiakum	12 36	726,460	3 16	276,900	11 23	45,500
36	Walla Walla			4 30	998,725	21 04	10,923,800
37	Whatcom	20 12	2,021,108	13 26	3,279,716	42 18	2,469,299
38	Whitman			4 68	1,369,310	23 40	22,353,920
39	Yakima		63,840	2 42	1,465,945	84 32	12,187,275
Totals.....			\$85,800,396		\$86,645,199		\$151,622,386

- (g) Includes \$481,696 valuation of mining lands.
(h) Includes \$6,000 valuation of railroad right-of-way not in operation.
(i) Includes \$52,098 valuation of oyster lands.
(j) Includes \$782,780 valuation of coal lands.
(k) Includes \$53,990 valuation of railroad right-of-way not in operation.
(l) Includes \$88,635 valuation of oyster lands.
(m) Includes \$145,221 valuation of oyster and tide lands.
(n) Includes \$14,060 valuation of railroad right-of-way not in operation.

Schedule "B"—Concluded.

COUNTIES	Valuation of improvements on land as equalized by county boards		Valuation of city and town lots (exclusive of improvements) as equalized by county board	Valuation of improvements on city and town lots as equalized by county board	Aggregate valuation of all real property, including improvements (except steam and electric railways) as equalized by county board	
	Average value per acre	Total value				
1 Adams	\$0 74	\$604,910	\$248,741	\$648,505	\$10,273,811	1
2 Asotin	4 14	809,840	806,329	377,870	3,586,869	2
3 Benton	11 54	815,880	459,020	440,240	6,275,220	3
4 Chelan	15 98	796,965	1,424,527	1,348,800	11,358,068	4
5 Clallam	11 09	198,580	1,740,523	404,340	12,828,922	5
6 Clarke	11 44	765,815	2,198,050	1,573,725	10,806,430	6
7 Columbia	1 06	800,840	220,580	481,600	5,597,130	7
8 Cowlitz	14 61	240,773	424,012	333,713	6,678,206	8
9 Douglas	0 86	496,065	169,538	282,255	8,258,008	9
10 Ferry	8 57	120,692	133,673	145,371	1,777,881	10
11 Franklin	0 40	132,100	489,900	355,998	4,012,740	11
12 Garfield	1 54	232,690	141,890	226,890	3,569,580	12
13 Grant	1 29	606,930	302,450	309,180	8,327,330	13
14 Grays Harbor	43 18	998,645	3,617,421	2,908,970	24,935,621	14
15 Island	10 09	114,010	97,330	59,715	1,745,140	15
16 Jefferson	26 24	195,080	739,922	510,060	5,729,604	16
17 King	46 82	2,949,060	125,203,477	46,791,200	202,484,787	17
18 Kitsap	45 58	549,465	1,524,677	572,390	6,107,998	18
19 Kittitas	7 41	573,790	1,872,225	1,540,430	10,379,120	19
20 Klickitat	3 54	647,870	466,443	439,151	7,824,602	20
21 Lewis	10 05	664,601	1,737,693	1,452,739	15,412,544	21
22 Lincoln	1 85	1,455,374	360,698	1,116,355	17,129,742	22
23 Mason	10 35	107,605	111,285	126,845	4,794,925	23
24 Okanogan	4 15	502,555	338,202	332,370	5,084,362	24
25 Pacific	15 01	961,620	1,508,841	858,054	10,820,809	25
26 Pend Oreille	26 43	417,154	166,647	279,727	3,619,697	26
27 Pierce	49 86	2,574,565	29,764,544	14,245,545	63,327,334	27
28 San Juan	20 46	286,470	59,185	82,705	1,135,855	28
29 Skagit	9 48	590,790	1,026,800	808,185	9,870,540	29
30 Skamania	25 49	139,085	27,460	59,125	3,088,585	30
31 Snohomish	38 70	1,486,525	7,870,660	4,715,260	25,466,490	31
32 Spokane	5 27	1,980,785	38,001,798	30,298,740	81,670,543	32
33 Stevens	11 25	990,179	381,128	368,370	6,391,629	33
34 Thurston	20 98	585,849	1,553,034	1,281,546	8,904,304	34
35 Wahkiakum	36 34	147,180	44,770	47,480	1,288,290	35
36 Walla Walla	2 14	1,112,540	4,634,200	3,735,510	21,404,775	36
37 Whatcom	16 49	965,285	4,647,687	3,539,526	16,922,571	37
38 Whitman	1 44	1,877,820	1,472,150	2,357,170	28,930,370	38
39 Yakima	18 81	2,718,770	3,718,890	3,772,180	23,926,400	39
Totals.....	.....	\$29,609,062	\$238,796,394	\$129,212,855	\$701,686,312	

SCHEDULE "C"—Table I.—STEAM RAILROADS.—Abstract of Assessment of the Operating Property of Steam Railroads, Electric Railways and Telegraph Lines in the State of Washington, as Revised, Corrected and Equalized by the State Board of Equalization for the Year 1916.

BELLINGHAM & NORTHERN RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock			TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized value	Actual value	Equalized value
Whatcom....	Main Line	36.00	23.100	\$24,738 67	\$8,905 92	\$205,727	\$4,379 11	\$101,158	\$36,417	\$372,621	\$242,144
	Main Track .....	.....	19.689	4,947 73	1,781 18	35,070	875 82	17,244	6,208	114,660	41,278
	Sidings .....	.....								
	Branch Lines—										
	Main Track .....	.....	28.516	18,554 00	6,679 44	177,112	8,284 33	87,087	31,351	579,065	208,468
	Sidings .....	.....	6.063	2,478 87	890 59	5,400	437 91	2,655	956	17,654	6,356
	Totals.....	.....	75.368	.....	.....	\$423,309	.....	\$208,144	\$74,962	\$1,384,000	\$498,241

BLACK HILLS & NORTHWESTERN RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock			TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized value	Actual value	Equalized value
Grays Harbor	Main Line	38.00	2.500	\$7,472 12	\$2,839 41	\$7,099	\$8,717 47	\$9,298	\$3,582	\$27,973	\$10,681
	Main Track .....	.....	.750	1,494 42	567 86	426	743 49	558	212	1,679	688
	Sidings .....	.....								
	Totals.....	.....	3.250	.....	.....	\$7,525	.....	\$9,851	\$3,744	\$29,652	\$11,369

Thurston.....	Main Line	40.00	10.000	\$7,472 12	\$74,721	\$2,083 85	\$30,880	\$8,717 47	\$37,175	\$1,438 90	\$14,870	\$111,886	\$44,759
	Main Track .....	.....	4.000	1,494 42	5,978	187 77	2,301	743 49	2,874	297 40	1,100	8,952	3,551
	Sidings .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals..	Totals.....	.....	14.000	.....	\$80,800	.....	\$32,230	.....	\$40,149	.....	\$16,080	\$130,848	\$48,340
	Main Line--	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Main Track .....	.....	12.500	\$7,472 12	\$68,401	.....	\$66,988	\$8,717 47	\$46,458	.....	\$18,402	\$130,880	\$55,300
Totals..	Main Track .....	.....	4.750	1,494 42	7,000	.....	2,817	743 49	3,592	.....	1,402	10,881	4,219
	Sidings .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Totals.....	.....	17.250	.....	\$100,500	.....	\$69,805	.....	\$50,000	.....	\$19,804	\$150,300	\$60,000

BLAKELY RAILROAD.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks		
				Rate per mile, actual value	Actual value	Equalized rate per mile
Mason.....	Main Line	37.00	17.580	\$6,750 00	\$118,655	\$2,497 50
	Main Track .....	.....	3.000	1,350 00	4,050	400 50
	Sidings .....	.....	.....	.....	.....	.....
Totals.....		.....	20.580	.....	\$122,715	.....
		.....	.....	.....	.....	\$45,404

Schedule "C"—Table I.—Steam Railroads—Continued.

CANADIAN PACIFIC RAILWAY (Equipment only).

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	
King.....	(On line N. P. Ry.)	46.00	25.864	.....	.....	.....	.....	\$568 43	\$14,006	\$251 43	\$6,760	
Skagit.....	(On line N. P. Ry.)	27.30	29.326	.....	.....	.....	.....	\$688 43	16,070	155 18	4,551	
Snohomish...	(On line N. P. Ry.)	41.00	42.535	.....	.....	.....	.....	\$609 43	24,178	235 47	10,068	
Whatcom.....	(On line N. P. Ry.)	36.00	23.960	.....	.....	.....	.....	\$609 43	16,456	204 63	5,924	
Totals.....			126.682	.....	.....	.....	.....	.....	\$72,000	.....	\$27,293	

CENTRALIA EASTERN RAILROAD.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	
Lewis.....	Main Line	35.30	7.038	\$7,600 01	\$53,854	\$8,720 80	\$19,230	\$151	.....	.....	.....
	Main Track .....	.....	1.109	1,520 00	1,686	544 16	608	30	.....	.....	.....
	Sidings .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.....			8.195	.....	\$55,540	.....	\$19,838	.....	\$1,113	.....	\$20,220	
Thurston...	Main Line	40 00	1.511	\$7,600 01	\$11,438	\$8,040 00	\$4,508	\$151 95	\$229	\$200 78	\$4,685	
	Main Track .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Sidings .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.....			2.997	\$7,600 01	\$25,337	.....	\$23,373	\$151 95	\$4,203	.....	\$24,350	
Totals.....	Main Line .....	.....	1.109	1,520 00	1,686	.....	608	30	.....	.....	.....
	Main Track .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Sidings .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.....			2.708	.....	\$27,023	.....	\$24,470	.....	\$1,340	.....	\$24,905	

Schedule "C"—Table I.—Steam Railroads—Continued.

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY—Continued.

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY—Continued.
Schedule "C"—Table 1.—Steam Railroads—Continued.

COUNTIES	CLASSIFICATION OF TRACK
Totals. . . (Concluded)	White River B'ch— Main Track . . . Sidings Oceur d'Alene B'ch Main Track . . . Sidings Other B'ch Lines— Main Track . . . Sidings Totals
EQUIPMENT (ONLY) OVER F	
Adams	Main Line (Over O.-W. R. R. & N. Co.) Main Track . . . Sidings Totals
Grays Harbor	Grays H'br. B'ch. (Over O.-W. R. R. & N. Co.) Main Track . . . 2d Main Track . . Sidings (Over N. P. Ry. Co.) Main Track . . . 2d Main Track . . Sidings Totals

King.....	46.00	20.365	\$7,587 02	\$154,510	\$3,490 08	\$71,074	\$154,510	\$71,074
(Over O. & P. S. R. R. Co.)								
Main Track		10.302	2,276 10	23,448	1,047 01	10,788	23,448	10,788
2d Main Track		8.002	1,517 40	12,142	608 00	5,585	12,142	5,585
Sidings								
(Over O.-W. R. R. & N. Co.)								
Main Track		3.340	7,587 02	25,341	3,490 08	11,657	25,341	11,657
2d Main Track		3.100	2,276 10	7,056	1,047 01	3,246	7,056	3,246
Sidings		3.600	1,517 40	5,509	608 00	2,576	5,509	2,576
White River B'ch— (Over White River Log. Co.)								
Main Track		1.900	1,517 40	2,888	608 00	1,326	2,888	1,326
Terminals— (Over N. P. Ry.Co.)								
Sidings		1.342	1,517 40	2,086	608 00	987	2,086	987
Totals.....		52.041		\$238,015		\$107,187	\$238,015	\$107,187
Lincoln.....	42.50							
Main Line								
(Over O.-W. R. R. & N. Co.)								
Main Track		7.000	\$7,587 02	\$53,109	\$3,224 48	\$22,571	\$53,109	\$22,571
Sidings		1.320	1,517 40	2,008	644 89	851	2,008	851
Totals.....		8.320		\$55,112		\$23,422	\$55,112	\$23,422
Pierce.....	45.00							
Grays H'br. B'ch.. (Over Tac. E. R. R. Co.)								
Main Track		26.186	\$1,517 40	\$39,735	\$382 83	\$17,881	\$39,735	\$17,881
Sidings		10.108	879 35	3,832	170 71	1,725	3,832	1,725
Terminals— (Over N. P. Ry.Co.)								
Sidings .....		.616	1,517 40	985	682 83	421	985	421
Totals.....		36.905		\$44,502		\$20,027	\$44,502	\$20,027
Snohomish.....	41.60							
Terminals								
(Over N. P. Ry.Co.)								
Sidings		1.225	\$1,517 40	\$1,859	\$331 24	\$773	\$1,859	\$773

Schedule "C"—Table I.—Steam Railroads—Continued.
CHICAGO, MILWAUKEE & ST. PAUL RAILWAY—Concluded.

COUNTIES	CLASSIFICA- TION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Actual value	Equalized value
Spokane.....	Main Line	39.70											
	(Over O.-W. R. R. & N. Co.)												
	Main Track		52.590					\$7,587 02	\$399,001	\$3,012 05	\$158,404	\$399,001	\$158,404
	2d Main Track...		1.290					2,270 10	2,986	903 61	1,166	2,986	1,166
	Sidings		9.280					1,517 40	14,051	602 41	5,578	14,051	5,578
	Terminals— (Over N. P. Ry.Co.)												
	Sidings .....		.438					1,517 40	665	602 41	264	665	264
Thurston....	Idaho & Wash. Northern Branch— (Over O.-W. R. R. & N. Co.)												
	Main Track		4.199					1,517 40	6,372	602 41	2,530	6,372	2,530
	Sidings		2.630					379 35	998	150 00	396	998	396
	Totals.....		70.407						\$424,023		\$168,388	\$424,024	\$168,388
	Grays H'br. B'ch.. (Over O.-W. R. R. & N. Co.)	40.00											
Whitman....	Main Track		1.740					\$1,517 40	\$2,640	\$906 96	\$1,056	\$2,640	\$1,056
	Sidings .....		.880					379 35	315	151 74	126	315	126
	Totals.....		2.570						\$2,955		\$1,182	\$2,955	\$1,182
	Main Line	40.20											
	(Over O.-W. R. R. & N. Co.)												
	Main Track		7.180					\$7,587 02	\$54,475	\$3,049 98	\$21,809	\$54,475	\$21,809
	Sidings .....		.580					1,517 40	880	609 99	354	880	354
	Totals.....		7.760						\$55,355		\$22,253	\$55,355	\$22,253

Totals.....		Main Line—		Chicago, Milwaukee & St. Paul Ry.—		Totals	
100,615	100,615	100,615	100,615	100,615	100,615	100,615	100,615
14,092	14,092	14,092	14,092	14,092	14,092	14,092	14,092
29,808	29,808	29,808	29,808	29,808	29,808	29,808	29,808
Branch Lines—		Branch Lines—		Branch Lines—		Branch Lines—	
80,885	80,885	80,885	80,885	80,885	80,885	80,885	80,885
3,920	3,920	3,920	3,920	3,920	3,920	3,920	3,920
42,101	42,101	42,101	42,101	42,101	42,101	42,101	42,101
Totals.....		Totals.....		Totals.....		Totals.....	
280,176	280,176	280,176	280,176	280,176	280,176	280,176	280,176
RECAPITULATION							
Chicago, Milwaukee & St. Paul Ry.—							
Track and equipment							
Equipment (only) over foreign lines							
Totals							

COLUMBIA & PUGET SOUND RAILROAD.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock			TOTAL VALUATION Real and Personal Property		
				Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Actual value
King.....	Main Line	46.00	33.652	\$68,309 11	\$31,445 19	\$1,068,194	\$5,846 66	162,765	\$2,480,347	\$1,140,969		
	Main Track .....	.....	10.328	20,607 73	9,433 53	97,430	1,604 00	7,620	228,870	106,030	
	2d Main Track .....	.....	20.441	13,671 82	6,290 04	128,554	1,009 33	10,655	301,324	138,009	
	Sidings .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Branch Lines.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Main Track .....	.....	22.057	27,343 64	12,578 07	277,560	2,188 66	26,709	650,588	299,269	
	Sidings .....	.....	5.342	6,886 91	3,144 52	16,708	534 67	1,514	39,373	19,112	
	Totals.....	91.830	\$43,431,000	\$226,400	\$123,463	\$3,700,000	\$1,701,990

Schedule "C"—Table I.—Steam Railroads—Continued.

GREAT NORTHERN RAILWAY.

COUNTIES	CLASSIFICA- TION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock			TOTAL VALUATION Real and Personal Property			
				Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Actual value	Equalized value
Chelan.....	Main Line	41.00											
	Main Track		66.601	\$88,266 79	\$5,978,657	\$86,189 38	\$2,410,249	\$9,555 35	\$539,796	\$8,507 69	\$239,616	\$6,448,452	\$2,643,865
	Sidings		36.412	17,653 36	642,784	7,237 86	263,546	1,711 07	62,308	701 54	25,544	705,097	289,090
	Branch Lines—												
	Main Track		51.426	26,480 04	1,361,763	10,866 82	558,323	2,566 61	181,990	1,032 31	54,116	1,488,758	612,439
Douglas.....	Sidings		4.185	4,413 84	18,470	1,809 47	7,573	427 77	1,790	175 89	784	20,260	8,907
	Totals.....		158.624		\$7,901,684		\$3,239,691		\$765,878		\$314,010	\$8,667,562	\$3,553,701
	Main Line	40.00											
	Main Track		15.388	\$88,266 79	\$1,358,249	\$85,306 72	\$543,300	\$8,555 35	\$181,650	\$8,422 14	\$52,660	\$1,489,899	\$595,960
	Sidings		3.586	17,653 36	63,287	7,061 84	25,315	1,711 07	6,194	694 43	2,454	69,421	27,769
Ferry.....	Branch Lines—												
	Main Track		60.839	26,480 04	1,611,019	10,592 02	644,408	2,566 61	156,150	1,026 64	62,460	1,767,169	708,868
	Sidings		5.504	4,413 84	24,291	1,765 84	9,716	427 77	2,354	171 11	942	26,645	10,658
	Totals.....		86.316		\$3,056,846		\$1,222,739		\$296,298		\$118,516	\$3,353,184	\$1,841,255
	Branch Lines	45.50											
Grant.....	Main Track		68.499	\$26,480 04	\$1,813,856	\$12,043 42	\$825,305	\$2,566 61	\$175,810	\$1,167 81	\$79,994	\$1,989,666	\$805,239
	Sidings		19.147	4,413 84	84,502	2,008 07	38,449	427 77	8,191	194 64	3,727	92,688	42,176
	Totals.....		87.046		\$1,898,358		\$863,754		\$184,001		\$83,721	\$2,082,359	\$847,475
	Main Line	30.50											
	Main Track		57.807	\$88,266 79	\$5,102,438	\$84,806 88	\$2,015,463	\$8,555 35	\$494,159	\$8,879 86	\$195,851	\$5,598,997	\$2,210,814
Totals.....	Sidings		18.236	17,653 36	822,227	6,978 06	127,280	1,711 07	31,232	675 87	12,837	353,459	189,617
	Totals.....		70.000		\$5,424,046		\$2,142,743		\$525,791		\$207,688	\$5,960,459	\$2,850,431

King.....	Main Line.....	46.00	45.137	\$88,266 79	\$3,935,863	\$40,602 72	\$1,833,497	\$8,555 35	\$886,384	\$8,985 46	\$177,714	\$4,372,197	\$2,011,211
	Main Track.....	.....	14.555	26,480 04	335,417	12,180 82	177,292	2,566 61	37,357	1,180 64	17,184	422,774	194,470
	2d Main Track.....	.....	52.111	17,653 36	919,984	8,120 55	423,170	1,711 07	89,166	787 09	41,016	1,009,100	464,186
	Sidings.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Everett & Cherry	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Valley Branch—	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Main Track.....	.....	11.782	22,066 70	259,928	10,150 68	119,291	2,138 84	25,186	988 87	11,562	284,404	130,866
	Sidings.....	.....	2.355	4,413 34	10,338	2,080 14	4,781	427 77	1,007	196 77	463	11,400	5,244
	Totals.....	.....	125.980	.....	\$5,500,985	.....	\$2,558,031	.....	\$539,000	.....	\$247,939	\$9,099,935	\$2,805,970
Lincoln.....	Main Line.....	42.50	64.689	\$88,266 79	\$5,709,890	\$37,513 39	\$2,426,704	\$8,555 35	\$553,437	\$3,686 02	\$235,210	\$9,283,327	\$2,661,914
	Main Track.....	.....	14.769	17,653 36	260,546	7,502 68	110,732	1,711 07	25,254	727 20	10,738	285,800	121,465
	Sidings.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Totals.....	.....	79.448	.....	\$5,970,436	.....	\$2,537,436	.....	\$578,691	.....	\$245,943	\$9,549,127	\$2,783,379
Okanogan...	Branch Lines.....	40.00	133.048	\$26,480 04	\$3,523,116	\$10,592 02	\$1,409,247	\$2,566 61	\$841,482	\$1,026 64	\$136,592	\$3,834,568	\$1,545,839
	Main Track.....	.....	16.973	4,413 34	74,466	1,765 34	29,787	427 77	7,218	171 11	2,887	81,634	32,674
	Sidings.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Totals.....	.....	149.921	.....	\$3,597,582	.....	\$1,439,034	.....	\$848,700	.....	\$139,479	\$3,946,232	\$1,578,513
Pend Oreille..	Main Line.....	40.60	14.761	\$88,266 79	\$1,302,906	\$35,836 32	\$528,980	\$8,555 35	\$126,236	\$3,473 47	\$51,272	\$1,429,192	\$590,252
	Main Track.....	.....	4.626	17,653 36	81,634	7,167 26	33,156	1,711 07	7,915	694 69	3,214	89,579	36,370
	Sidings.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Totals.....	.....	19.387	.....	\$1,384,570	.....	\$562,136	.....	\$134,201	.....	\$54,486	\$1,518,771	\$616,622
Pierce.....	Main Line.....	45.00	3.303	\$17,653 36	\$63,309	\$7,944 01	\$26,239	\$1,711 07	\$5,652	\$769 98	\$2,543	\$63,961	\$23,782
	Sidings.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Skagit.....	Main Line.....	27.30	27.017	\$88,266 79	\$2,334,704	\$24,086 83	\$651,024	\$8,555 35	\$231,140	\$2,385 61	\$63,101	\$2,615,844	\$714,125
	Main Track.....	.....	17.171	17,653 36	303,126	4,819 37	82,753	1,711 07	29,381	467 12	8,021	332,507	90,774
	Sidings.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Branch Lines—	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Main Track.....	.....	53.682	26,480 04	1,420,707	7,229 05	367,863	2,566 61	137,704	700 68	37,598	1,558,411	425,446
	Sidings.....	.....	18.416	4,413 34	81,276	1,204 84	22,188	427 77	7,878	116 78	2,151	89,154	24,339
	Totals.....	.....	110.253	.....	\$4,189,813	.....	\$1,143,818	.....	\$406,103	.....	\$110,896	\$4,595,916	\$1,254,684

Schedule "C"—Table I.—Steam Railroads—Continued.

GREAT NORTHERN RAILWAY—Continued.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Per.)	Mileage	REAL PROPERTY Right-of-way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock			TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized value	Actual value
Snohomish...	Main Line	41.60									
	Main Track		89,750	\$88,906 79	\$7,921,944	\$86,718 02	\$8,996,528	\$9,556	\$8,689,787	\$8,014,960	
	2d Main Track		17,080	26,480 34	450,951	11,015 74	187,397	2,606	494,064	206,780	
	Sidings		50,780	17,068 36	869,611	7,343 8	372,992	1,711	968,519	409,145	
	Everett & Cherry Valley Branch										
Spokane.....	Main Track		6,193	22,086 70	136,436	9,179 71	56,758	2,138	149,032	62,239	
	Sidings		1,084	4,418 34	4,563	1,835 91	1,868	427	5,005	2,082	
	Totals		164,787		\$9,410,514		\$8,914,773		\$10,322,637	\$4,294,210	
	Main Line	39.70									
	Main Track		59,715	\$88,906 79	\$5,270,861	\$85,041 92	\$2,092,528	\$8,855	\$5,781,754	\$2,296,348	
Stevens	2d Main Track		3,518	26,480 04	93,157	10,612 58	38,983	2,606	102,189	40,568	
	Sidings		57,308	17,643 86	1,011,679	7,008 86	401,636	1,711	1,109,737	440,505	
	Spokane Falls & Northern Branch										
	Main Track		16,768	35,308 71	591,846	14,016 76	234,903	3,422	649,211	257,757	
	Sidings		2,601	9,895 68	22,958	3,504 19	9,114	855	25,183	9,937	
	Totals		139,005		\$6,960,491		\$2,775,224		\$877,560	\$3,008,061	\$8,014,215
Stevens	Spokane Falls & Northern Branch										
	Main Track	31.50	78,749	\$85,306 71	\$2,408,865	\$11,121 61	\$880,908	\$8,422 14	\$262,379	\$1,077 97	\$889,707
	Sidings		13,490	8,626 68	118,807	2,780 40	37,424	855 64	11,516	299 50	41,051
	Other Rich Lines										
	Main Track		47,402	26,480 04	1,256,790	8,341 21	393,991	2,500 61	121,810	808 48	494,298
	Sidings		6,664	4,418 34	28,999	1,500 21	9,125	427 77	2,838	184 76	10,009
	Totals		141,239		\$4,008,407		\$1,292,048		\$398,519	\$1,223,382	\$1,345,089

Whatcom....	Main Line.....	36.00	31.830	\$68,266 79	\$2,810,328	\$31,776 04	\$1,011,717	\$8,555 35	\$272,394	\$3,079 98	\$98,002	\$3,082,720	\$1,109,779
	Main Track		14.74	17,633 36	260,299	6,355 21	93,708	1,711 07	25,230	615 99	9,083	285,529	102,791
	Sidings												
	Totals.....		46.584		\$3,070,625		\$1,105,425		\$297,624		\$107,145	\$3,368,249	\$1,212,570
Totals....	Main Line—												
	Main Track		472.724	\$68,266 79	\$41,725,828		\$16,808,980	\$8,555 35	\$4,044,821		\$1,629,228	\$45,770 149	\$18,438,218
	2d Main Track		35.103	26,480 04	929,529		401,872	2,566 61	90,085		38,962	1,019,624	440,824
	Sidings		273.063	17,653 36	4,820,479		1,960,527	1,711 07	467,230		190,027	5,287,709	2,150,554
	Everett & Cherry												
	Valley Branch—												
	Main Track		17.935	22,066 70	886,766		176,049	2,138 84	38,360		17,063	434,126	188,112
	Sidings		3.389	4,413 34	14,966		6,679	427 77	1,449		647	16,406	7,926
	Spokane Falls &												
	Northern Branch—												
	Main Track		90.512	35,306 71	3,196,661		1,055,171	3,422 14	309,744		102,273	3,505,425	1,157,444
	Sidings		16.061	8,826 68	141,765		46,538	855 54	13,741		4,510	155,506	51,048
	Other B'ch Lines—												
	Main Track		414.926	26,480 04	10,987,257		4,221,027	2,566 61	1,084,952		409,127	12,052,209	4,630,154
	Sidings		70.689	4,413 34	311,974		116,838	427 77	30,239		11,925	342,213	128,163
	Totals.....		1,394.402		\$62,523,235		\$24,798,691		\$6,060,131		\$2,403,152	\$68,583,366	\$27,196,843
EQUIPMENT (ONLY) USED OVER N. P. RY.													
Tracks between Seattle and Vancouver, Wash.													
Clarke.....	Main Track	33.70	17.300					\$8,555 35	\$148,008	\$2,883 15	\$49,878	\$148,008	\$49,878
	2d Main Track		17.299					2,566 61	44,400	864 95	14,963	44,400	14,963
	Sidings		6.886					1,711 07	11,748	576 63	3,959	11,748	3,959
	Totals.....		41.465						\$204,156		\$68,800	\$204,156	\$68,800
Cowlitz.....	Main Track	29.50	40.178					\$8,555 35	\$343,737	\$2,523 89	\$101,402	\$343,737	\$101,402
	2d Main Track		40.178					2,566 61	103,121	757 15	30,421	103,121	30,421
	Sidings		7.489					1,711 07	12,727	504 77	3,764	12,727	3,764
	Totals.....		87.794						\$459,585		\$135,577	\$459,585	\$135,577
King.....	Main Track	46.00	24.094					\$8,555 35	\$208,133	\$3,985 46	\$94,821	\$208,133	\$94,821
	2d Main Track		24.111					2,566 61	61,884	1,180 64	28,466	61,884	28,466
	Sidings		3.625					1,711 07	6,203	787 09	2,853	6,203	2,853
	Totals.....		51.830						\$274,220		\$126,140	\$274,220	\$126,140

Schedule "C"—Table 1.—Steam Railroads—Continued.

GREAT NORTHERN RAILWAY—Concluded.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of Way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock			TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value
Lewis.....	Main Track.....	35.30	23.432	.....	.....	.....	.....	\$3,555 35	\$243,249	\$3,002 82	\$67,032
	2d Main Track.....	.....	* 30.872	.....	.....	.....	.....	2,503 61	79,235	918 35	23,367
	Sidings.....	.....	26.461	.....	.....	.....	.....	1,711 07	45,311	612 56	16,222
	Totals.....	.....	85.785	.....	.....	.....	.....	.....	.....	.....	\$131,671
Pierce.....	Main Track.....	45.00	38.389	.....	.....	.....	.....	\$3,555 35	.....	\$3,849 91	\$147,734
	2d Main Track.....	.....	† 20.861	.....	.....	.....	.....	2,503 61	.....	1,154 97	24,094
	Sidings.....	.....	16.576	.....	.....	.....	.....	1,711 07	.....	763 36	12,070
	Totals.....	.....	74.926	.....	.....	.....	.....	.....	\$108,736	.....	\$183,958
Thurston.....	Main Track.....	40.00	24.246	.....	.....	.....	.....	\$3,555 35	\$307,450	\$3,432 14	\$82,360
	2d Main Track.....	.....	7.085	.....	.....	.....	.....	2,000 61	18,184	1,026 64	7,274
	Sidings.....	.....	8.300	.....	.....	.....	.....	1,711 07	14,815	694 43	5,729
	Totals.....	.....	39.631	.....	.....	.....	.....	.....	\$239,349	.....	\$85,360
Totals.....	Main Track.....	.....	172.641	.....	.....	.....	.....	\$3,555 35	\$1,477,006	.....	\$533,957
	2d Main Track.....	.....	140.408	.....	.....	.....	.....	2,503 61	300,397	.....	133,695
	Sidings.....	.....	68.462	.....	.....	.....	.....	1,711 07	117,127	.....	44,664
	Totals.....	.....	381.499	.....	.....	.....	.....	.....	\$1,954,400	.....	\$742,126
RECAPITULATION											
Track and equipment.....				.....	\$12,523,235	.....	.....	.....	\$6,000,131	.....	\$68,538,365
Equipment (only) over foreign lines.....				.....	.....	.....	.....	.....	1,954,400	.....	1,004,460
Grand Totals.....				1,775.901	\$12,523,235	.....	.....	.....	\$8,014,630	.....	\$70,537,805
				.....	.....	.....	.....	.....	.....	.....	\$27,938,009

* Includes 2.441 miles third track.

† Includes 1.250 miles third track.

LITTLE RIVER RAILROAD & LOGGING COMPANY.

[illegible]

MARYSVILLE & ARLINGTON RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property		
				Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Actual value	Equalized value	
Snobomish...	Main Line	41.60												
	Main Track .....	.....	15,000	\$8,000 00	\$120,000	\$8,328 00	\$49,920	\$1,085 42	\$16,281	\$451 58	\$6,778	\$186,281	\$56,693
	Sidings .....	.....	10,220	1,600 00	16,852	665 60	6,802	217 09	2,219	90 81	928	18,571	7,725
	Totals.....	.....	25,220	.....	\$136,852	.....	\$56,722	.....	\$18,500	.....	\$7,696	\$154,852	\$64,418

Schedule "C"—Table 1.—Steam Railroads—Continued.

MARYSVILLE & NORTHERN RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Actual value	Equalized value
Snohomish...	Main Line	41.60	7,500	\$6,140 35	\$46,058	\$2,554 89	\$19,168	\$4,175 44	\$31,518	\$1,736 93	\$19,027	\$77,389	\$82,185
	Main Track .....	.....	5,250	1,223 07	6,447	510 89	2,682	835 00	4,384	357 40	1,824	10,881	4,906
	Sidings .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Totals.....	12,750	\$52,500	\$21,840	\$35,700	\$14,851	\$99,300	$36,011

MILWAUKEE TERMINALS RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Actual value	Equalized value
Jefferson.....	1 landing and spur.....	30.00	0	.....	.....	.....	\$7,330	.....	\$13,169	.....	\$53,524	\$13,074
Clallam.....	1 landing and spur.....	50.00	0	.....	.....	.....	6,428	.....	7,252	.....	20,107	10,054
King.....	3 land'gs and spurs.....	45.00	0	.....	.....	.....	19,172	.....	24,212	.....	65,891	30,310
Kitap.....	2 land'gs and spurs.....	42.50	6	.....	.....	.....	11,302	.....	15,200	.....	41,792	17,762
Pierce.....	3 land'gs and spurs.....	45.00	2	.....	.....	.....	76,592	.....	125,658	.....	236,737	133,104
Whatcom..	1 landing and spur.....	30.00	.....	.....	.....	.....	5,003	.....	9,535	.....	25,309	9,144
	Totals.....	.....	6,890	.....	\$387,500	.....	\$127,135	.....	\$195,000	.....	\$482,500	\$213,446

NORTHERN PACIFIC RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	REAL PROPERTY Right-of-way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property		
			Mileage	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Actual value	Equalized value
Adams.....	Main Line	40.00											
	Main Track		57.516	\$81,745 98	\$4,701,600	\$82,603 37	\$1,880,679	\$16,302 68	\$987,665	\$8,521 07	\$873,066	\$5,639,364	\$2,255,745
	Sidings		19.242	16,349 19	314,591	6,539 68	125,837	3,260 54	62,739	1,304 22	25,068	877,330	150,933
	Branch Lines—												
	Main Track		19.631	24,523 78	482,653	9,809 51	198,061	4,800 80	90,256	1,956 82	38,502	578,909	231,563
	Sidings		1.801	4,067 30	7,361	1,634 92	2,944	815 13	1,468	326 05	587	8,829	3,531
	Totals.....		98.240		\$5,506,304		\$2,202,521		\$1,088,128		\$439,251	\$6,604,432	\$2,641,772
Benton.....	Main Line	43.00											
	Main Track		43.739	\$81,745 98	\$3,575,485	\$35,150 75	\$1,537,459	\$16,302 68	\$713,063	\$7,010 15	\$303,617	\$4,288,548	\$1,844,076
	Sidings		13.135	16,349 19	214,747	7,030 15	92,341	3,260 54	42,827	1,402 03	18,416	257,574	110,757
	Totals.....		56.874		\$3,790,232		\$1,629,800		\$755,890		\$325,033	\$4,546,122	\$1,954,833
Clarke.....	Main Line	33.70											
	Main Track		17.300	\$81,745 98	\$1,414,206	\$27,543 38	\$476,587	\$16,302 68	\$282,036	\$5,494 00	\$35,046	\$1,693,241	\$571,633
	2d Main Track		17.299	24,523 78	424,237	8,264 51	142,963	4,800 80	84,606	1,648 20	28,512	508,843	171,480
	Sidings		7.869	16,349 19	128,632	5,509 69	43,356	3,260 54	25,657	1,038 30	8,646	154,309	52,002
	Branch Lines—												
	Main Track		27.249	24,523 78	668,248	8,264 51	225,200	4,800 80	133,269	1,648 20	44,912	801,517	270,112
	Sidings		3.911	4,067 30	15,965	1,377 42	5,387	815 13	3,188	274 70	1,074	19,173	6,461
	Totals.....		73.628		\$2,651,327		\$933,496		\$528,756		\$178,190	\$3,180,083	\$1,071,688
Columbia....	Dayton Branch ...	36.50											
	Main Track		8.183	\$28,611 07	\$234,124	\$10,443 04	\$85,455	\$5,705 94	\$46,692	\$2,082 67	\$17,042	\$230,816	\$102,497
	Sidings		2.457	8,174 59	20,085	2,933 73	7,331	1,630 27	4,006	595 05	1,462	24,091	8,793
	Totals.....		10.640		\$254,209		\$92,783		\$50,698		\$18,504	\$304,907	\$111,290

Schedule "C"—Table I.—Steam Railroads—Continued.

NORTHERN PACIFIC RAILWAY—Continued.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Actual value	Equalized value
Cowitz.....	Main Line	29.50	40.178	\$31,745 98	\$3,284,338	\$24,115 06	\$368,894	\$16,302 68	\$365,009	\$4,809 29	\$138,228	\$3,989,397	\$1,162,122
	Main Track .....	.....	40.178	24,523 78	985,316	7,294 52	290,669	4,890 80	198,508	1,442 79	57,968	1,181,819	348,687
	2d Main Track .....	.....	8.304	16,349 19	135,764	4,823 01	40,050	3,290 54	27,075	961 86	7,987	162,889	48,087
	Sidings .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Totals.....	.....	88.660	.....	\$4,405,468	.....	\$1,299,613	.....	\$378,587	.....	\$259,188	\$5,294,055	\$1,558,736
Franklin.....	Main Line	43.00	42.671	\$31,745 98	\$3,488,181	\$35,150 75	\$1,499,918	\$16,302 68	\$365,632	\$7,010 15	\$239,130	\$4,188,833	\$1,799,048
	Main Track .....	.....	41.751	16,349 19	682,595	7,080 15	238,516	3,290 54	136,131	1,402 09	59,536	818,726	352,052
	Sidings .....	.....	1.781	28,611 07	50,956	12,302 76	21,911	5,705 94	10,162	2,453 53	4,870	61,118	26,291
	Wallula Branch—	.....	.011	8,174 59	90	3,515 07	39	1,680 27	18	701 02	8	108	47
	Main Track .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Sidings .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Other B'ch Lines—	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Totals.....	.....	132.006	.....	\$5,257,224	.....	\$2,260,607	.....	\$1,049,454	.....	\$450,836	\$6,305,678	\$2,711,442
Grant.....	Washington Cen- tral Branch	39.50	19.153	\$28,611 07	\$547,988	\$11,301 37	\$216,455	\$5,705 94	\$109,286	\$2,258 85	\$43,168	\$357,274	\$259,023
	Main Track .....	.....	2.708	8,174 59	22,096	3,223 98	8,728	1,680 27	4,407	643 96	1,741	26,508	10,469
	Sidings .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Other B'ch Lines—	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Totals.....	.....	92.804	.....	\$2,210,982	.....	\$978,899	.....	\$140,680	.....	\$174,172	\$2,651,921	\$1,047,510

Grays Harb'r	38.00	42.496	\$82,068 86	\$1,389,517	\$12,425 38	\$528,017	\$6,521 07	\$277,118	\$2,478 01	\$105,308	\$1,006,030	\$838,320
Main Track	.....	20.072	8,174 50	164,080	3,106 34	62,350	1,030 27	32,723	619 50	12,435	196,303	74,785
Sidings	.....										
Other B'ch Lines	.....										
Main Track	.....	57.472	24,523 78	1,409,431	9,319 04	535,534	4,890 80	231,084	1,858 50	108,812	1,000,515	642,306
Sidings	.....	11.300	4,087 30	46,432	1,553 17	17,644	815 13	9,260	309 75	3,519	55,032	21,163
Totals	.....	131.340	.....	\$3,009,400	.....	\$1,143,544	.....	\$800,180	.....	\$228,069	\$3,009,640	\$1,371,664
Jefferson	39.00	26.400	\$24,523 78	\$847,428	\$9,564 27	\$252,497	\$4,890 80	\$129,117	\$1,907 41	\$50,356	\$776,545	\$302,853
Main Track	.....	1.232	4,087 30	5,240	1,504 05	2,044	815 13	1,045	317 90	408	6,236	2,452
Sidings	.....										
Totals	.....	27.632	.....	\$852,668	.....	\$254,541	.....	\$130,102	.....	\$50,764	\$782,830	\$305,305
King	46.00	111.058	\$81,745 93	\$9,078,539	\$37,606 13	\$4,176,125	\$16,302 68	\$1,510,543	\$7,499 23	\$832,849	\$10,889,082	\$5,008,977
Main Track	.....	37.757	24,523 78	925,944	11,280 94	425,334	4,890 80	184,682	2,249 77	84,945	1,110,605	510,879
2d Main Track	.....	146.353	16,349 19	2,392,753	7,520 63	1,100,067	3,260 54	477,190	1,499 85	219,508	2,869,943	1,320,175
Sidings	.....										
Buckley Branch	.....										
Main Track	.....	12.238	28,611 07	350,142	13,161 09	161,065	5,705 94	69,829	2,624 73	32,121	419,971	193,186
Sidings	.....	7.370	8,174 50	60,247	3,760 31	27,713	1,630 27	12,015	749 92	5,526	72,262	33,239
Other B'ch Lines	.....										
Main Track	.....	79.389	24,523 78	1,946,918	11,280 94	895,583	4,890 80	388,276	2,249 77	178,607	2,335,194	1,074,190
Sidings	.....	20.333	4,087 30	83,107	1,880 16	38,220	815 13	16,574	374 96	7,624	99,681	45,853
Totals	.....	414.496	.....	\$14,837,650	.....	\$6,825,319	.....	\$2,959,089	.....	\$1,361,180	\$17,796,730	\$8,186,499
Kittitas	38.50	73.174	\$81,745 93	\$5,981,677	\$31,472 18	\$2,302,945	\$16,302 68	\$1,192,982	\$6,276 53	\$459,279	\$7,174,609	\$2,762,224
Main Track	.....	8.460	24,523 78	207,471	9,441 66	79,871	4,890 80	41,376	1,882 96	15,330	248,847	95,806
2d Main Track	.....	60.057	16,349 19	982,374	6,294 44	378,214	3,260 54	195,916	1,255 31	75,428	1,178,290	453,642
Sidings	.....										
Branch Lines	.....										
Main Track	.....	7.180	24,523 78	176,081	9,441 66	67,791	4,890 80	35,116	1,882 96	13,520	211,197	81,311
Sidings	.....	9.331	4,087 30	38,139	1,573 61	14,683	815 13	7,608	313 83	2,928	45,745	17,611
Totals	.....	158.232	.....	\$7,385,742	.....	\$2,843,504	.....	\$1,472,946	.....	\$567,085	\$8,858,688	\$3,410,594
Lewis	35.80	28.432	\$81,745 98	\$2,324,200	\$29,265 04	\$832,064	\$16,302 68	\$463,518	\$5,836 36	\$165,939	\$2,757,719	\$998,003
Main Track	.....	* 30.872	24,523 78	757,088	8,779 51	271,041	4,890 80	150,989	1,750 91	54,054	908,087	325,005
2d Main Track	.....	28.341	16,349 19	463,352	5,853 01	165,880	3,260 54	92,407	1,167 27	38,082	555,759	198,962
Sidings	.....										

* Includes 2.441 miles third track.

Schedule "C"—Table 1.—Steam Railroads—Continued.

NORTHERN PACIFIC RAILWAY—Continued.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock			TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized value	Actual value
Spokane..... (Concluded)	Palouse & Lewiston Branch—										
	Main Track		25.238	\$32,008 30	\$325		\$327.621	\$0.021 07	\$409,830	\$322,950	\$409,830
	Sidings		3.802	8,174 50	31		12,533	1,630 27	37,866	15,003	37,866
	Washington Central Branch—										
	Main Track		23.676	28,611 07	677		208,920	5,705 94	512,490	322,558	512,490
Thurston....	Sidings		2.679	8,174 50	21		8,594	1,630 27	26,267	10,428	26,267
	Other Branch—										
	Sidings .....		.212	4,037 30			344	815 11	1,040	413	1,040
	Totals		186.608		\$7,059,883		\$2,802,574		\$1,407,800	\$658,921	\$6,661,405
	Main Line	40.00									
Walla Walla	Main Track		25.191	\$31,745 08	\$2,050,292	\$32,008 37	\$328,705	\$16,302 68	\$410,651	\$164,272	\$2,460,943
	2d Main Track		25.191	24,223 78	617,779	9,309 51	247,111	4,890 80	123,304	49,232	740,563
	Sidings		6.987	16,349 19	114,282	6,539 08	45,692	3,230 54	22,751	9,113	137,013
	Prairie Line—										
	Main Track		17.163	32,008 30	561,202	13,079 34	224,467	6,521 07	111,921	44,768	673,123
Walla Walla	Sidings		6.271	8,174 50	51,253	3,209 84	20,503	1,630 27	10,223	4,089	61,486
	Grays Harbor Branch—										
	Main Track		10.124	32,008 30	361,003	13,079 34	132,416	6,521 07	66,019	26,403	397,027
	Sidings		8.064	8,174 50	25,047	3,209 84	10,019	1,630 27	4,996	1,908	30,042
	Olympia Branch—										
Walla Walla	Main Track		29.402	28,611 07	514,042	11,444 43	325,617	5,705 94	164,346	64,989	579,287
	Sidings		12.037	8,174 50	99,893	3,209 84	30,350	1,630 27	19,624	7,849	118,632
	Totals		134.480		\$4,072,203		\$1,403,804		\$631,708	\$272,717	\$3,440,495
	Walla Walla Branch—										
	Main Track	42.00	11.606	\$28,013 07	\$922,081	\$12,015 05	\$190,453	\$5,705 94	\$95,317	\$27,411	\$929,249
	Sidings		3.806	8,174 50	23,685	3,209 84	12,048	1,630 27	6,721	2,403	24,403

[illegible]

Schedule "C"—Table I.—Steam Railroads—Continued.

NORTHERN PACIFIC RAILWAY—Concluded.

COUNTIES	CLASSIFICATION OF TRACK	As'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property		
				Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Actual value	Equalized value	
Totals.... (Concluded)	Grays H'br. B'ch—													
	Main Track		56.619	\$82,606 30	\$1,551,349		\$707,256	\$6,521 07	\$809,216		\$141,046	\$2,220,564	\$948,306	
	Sidings		25.168	8,174 50	306,721		78,310	1,680 27	41,027		16,518	246,748	98,928	
	Palouse & Lewiston Branch—													
	Main Track		84.231	32,009 30	2,754,215		1,103,069	6,521 07	549,270		219,980	3,303,491	1,323,056	
	Sidings		14.115	8,174 50	116,384		48,226	1,680 27	23,011		9,220	138,396	55,446	
	Everett Branch—													
	Main Track		11.373	32,009 30	371,878		154,701	6,521 07	74,164		30,388	446,042	185,553	
	Sidings		13.422	8,174 50	109,719		45,643	1,680 27	21,851		9,108	131,000	54,746	
	Buckley Branch—													
	Main Track		38.546	28,611 07	909,787		435,406	5,705 94	191,411		86,833	1,151,198	522,238	
	2d Main Track		1.528	12,261 50	18,783		8,431	2,445 40	3,737		1,081	22,478	10,112	
	Sidings		13.588	8,174 50	111,085		50,588	1,680 27	22,144		10,084	133,180	60,552	
	South Bend B'ch—													
	Main Track		40.053	28,611 07	1,145,969		474,800	5,705 94	228,540		94,735	1,374,499	589,708	
	Sidings		20.287	8,174 50	165,838		69,707	1,680 27	33,074		13,901	198,912	88,008	
	Washington Central Branch—													
Main Track		58.677	28,611 07	1,621,589		595,860	5,705 94	323,395		118,734	1,944,984	774,094		
Sidings		14.790	8,174 50	130,902		44,451	1,680 27	24,111		8,366	146,013	53,316		
Wallula Branch—														
Main Track		108.904	28,611 07	3,115,880		1,288,383	5,705 94	621,400		237,083	3,737,200	1,545,899		
Sidings		11.873	8,174 50	97,057		39,873	1,680 27	19,369		7,972	116,413	47,945		
Dayton Branch—														
Main Track		13.366	28,611 07	382,637		161,364	5,705 94	76,379		32,181	459,396	198,545		
Sidings		2.520	8,174 50	28,775		12,067	1,680 27	5,789		2,411	34,514	14,498		
Bellingham B'ch—														
Main Track		86.197	28,611 07	2,466,186		1,082,922	5,705 94	491,885		204,092	2,958,023	1,220,984		
Sidings		15.062	8,174 50	130,188		53,066	1,680 27	26,023		10,709	156,801	64,407		
Idaho Falls Branch—														
Main Track		22.748	28,611 07	650,946		264,804	5,705 94	129,700		46,724	790,644	320,082		
Sidings		6.150	8,174 50	50,273		18,000	1,680 27	10,090		3,404	60,600	21,708		

Proceedings State Board of Eq

All Other Branch
Lines—
Main Track
Sidings
Totals.....

EQUIPMENT (ONLY) OVER F
(Spokane, Portland & Sea

Clarke.....
Main Line
Main Track
2d Main Track..

Totals.....

Franklin.....
Branch Lines
Main Track
Sidings

Totals.....

Totals—Equipment over
foreign lines

Grand Totals.....

GRAND TOTALS

Schedule "C"—Table I.—Steam Railroads—Continued.

OREGON-WASHINGTON RAILROAD & NAVIGATION COMPANY.

Proceedings State Board of Equalization, 1916

Franklin.....	Main Line	43.00	7.100	\$24,273 90	\$108,394	12,078	\$38,287 30	\$250,450	\$4,797 82	\$24,302	\$2,008 00	\$14,772	\$337,746	\$274,231
	Main Track .....		.770	16,864 89			7,247 47	5,581	950 50	789	412 61	318	13,717	5,800
	Sidings													
	Branch Lines--													
	Main Track		28.000	25,281 88	793,567	10,871 21	1,811 87	311,184	1,489 35	41,194	618 92	17,713	764,761	328,847
Garfield.....	Sidings		1.510	4,213 65	6,363			2,738	290 80	322	108 15	150	6,725	2,802
	Totals.....		35.000		\$1,346,302			\$578,910		\$76,647		\$32,950	\$1,422,949	\$611,800
	Pomeroy Branch--	34.80												
	Main Track		16.000	\$48,709 17	\$541,082	\$11,730 79		\$188,270	\$1,919 13	\$80,802	\$607 86	\$10,719	\$571,834	\$105,098
	Sidings		2.000	8,427 29	17,613	2,382 70		6,125	479 78	1,003	166 96	340	18,616	6,478
Grays Harbor	Totals.....		18.140		\$558,645			\$194,405		\$81,805		\$11,059	\$590,450	\$205,476
	Grays Hbr. B'ch.	38.00												
	Main Track		41.480	\$33,709 17	\$1,398,256	\$12,809 48		\$531,357	\$1,919 18	\$79,605	\$729 27	\$80,220	\$1,477,861	\$561,687
	2d Main Track		1.650	12,640 94	20,856	4,903 50		7,924	719 67	1,167	273 47	451	52,045	8,377
	Sidings		15.370	8,427 29	129,527	3,202 37		40,220	479 78	7,874	182 82	2,802	136,901	52,022
King.....	Other B'ch Lines													
	Main Track		13.630	25,281 88	345,078	9,607 11		131,137	1,489 35	19,947	546 96	7,466	864,745	138,603
	Sidings		1.650	4,213 65	6,963	1,601 19		2,642	230 80	398	91 16	150	7,349	2,792
	Totals.....		78.800		\$1,900,692			\$722,262		\$108,309		\$41,119	\$92,008,901	\$763,381
	Main Line	40.00												
Lewis.....	Main Track		9.420	\$54,273 98	\$708,861	\$38,765 55		\$365,171	\$4,797 82	\$45,195	\$2,307 00	\$20,730	\$839,046	\$285,061
	2d Main Track		3.870	25,281 88	97,841	11,629 66		45,007	1,489 35	5,570	662 10	2,582	108,411	47,569
	Sidings		30.920	16,864 89	521,144	7,738 11		239,736	959 58	29,699	441 40	13,648	550,813	238,374
	Totals.....		44.210		\$1,412,866			\$649,904		\$80,434		\$37,000	\$1,423,270	\$386,904
	Main Line	35.80												
Lowia.....	Sidings .....		.000	\$16,864 89	\$1,517	\$6,083 94		\$543	\$600 50	\$56	\$343 32	\$31	\$1,008	\$574
	Grays Hbr. B'ch													
	Main Track		5.640	\$3,709 17	190,120	12,087 88		68,028	1,919 18	10,824	687 06	3,876	\$30,944	71,938
	Sidings		2.050	8,427 29	17,276	3,016 97		6,185	479 78	994	171 76	352	16,906	6,537
	Other B'ch Lines													
Main Track			2.000	25,281 88	50,504	9,050 91		18,102	1,489 35	2,879	516 29	1,081	53,443	19,133

Schedule "C"—Table I.—Steam Railroads—Continued.

OREGON-WASHINGTON RAILROAD & NAVIGATION COMPANY—Continued.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property		
			Mileage	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Actual value	Equalized value
Lincoln.....	Main Line	42.50	7.000	\$84,272 98	\$339,911	\$35,816 00	\$250,712	\$4,797 82	\$38,535	\$2,939 97	\$14,278	\$928,496	\$264,985
	Main Track		1.350	16,854 50	25,754	7,153 20	9,870	969 56	1,295	407 81	551	24,049	10,221
	Sidings												
	Totals.....		8.350		\$312,665		\$260,582		\$34,830		\$14,829	\$947,545	\$275,206
Pacific.....	Branch Lines	37.50	23.650	\$25,291 88	\$724,326	\$9,480 71	\$271,622	\$1,439 35	\$41,237	\$639 76	\$287,086	\$765,503	\$287,086
	Main Track		3.110	4,213 65	18,104	1,580 12	4,914	239 80	745	59 06	407	13,860	5,194
	Sidings												
	Totals.....		31.760		\$737,430		\$276,536		\$41,982		\$287,493	\$779,363	\$292,280
Pierce.....	Main Line	45.00	2.240	\$84,272 98	\$197,199	\$37,922 82	\$68,739	\$4,797 1		\$2,159 02	\$5,052		\$68,791
	Main Track		7.730	16,854 50	131,297	7,564 57	50,054	969 56		451 80	3,304		62,445
	Sidings												
	Totals.....		10.130		\$328,493		\$118,793		\$18,702		\$8,356	\$247,196	\$130,239
Spokane....	Main Line	39.70	23.045	\$84,272 98	\$2,764,739	\$38,456 35	\$1,106,505	\$4,797 82	\$159,544	\$1,904 78	\$82,942	\$2,943,548	\$1,168,507
	Main Track		1.575	25,291 88	39,819	10,036 91	15,808	1,439 35	2,267	671 42	300	42,085	16,708
	2d Main Track		7.730	16,854 50	129,780	6,691 27	51,523	969 56	7,390	380 96	2,338	187,169	64,456
	Sidings												
	Colfax Branch—												
	Main Track		44.850	68,204 70	2,834,731	25,002 27	1,125,388	3,598 36	161,390	1,439 55	64,070	2,939,117	1,160,468
	Sidings		16.740	12,640 94	236,891	5,018 45	94,046	719 67	12,487	285 71	6,354	250,378	99,400
	Other Branch Lines—												
	Main Track		4.100	26,251 65	103,055	19,035 91	41,151	1,439 35	5,901	671 42	2,343	109,557	43,494
	Sidings		230	4,213 65	1,180	1,072 82	493	239 80	67	95 24	27	1,247	495
Totals.....			110.200		\$9,130,856		\$2,435,940		\$349,041		\$138,908	\$9,479,897	\$2,672,518

Thurston....	Grays Hbr. B'ch... Main Track Sidings Other B'ch Lines— Main Track Sidings Totals.....	40.00	7.310 1.900 11.490 4.330 25.030	\$33,709 17 8,427 20 25,281 88 4,213 63	\$246,414 16,012 200,499 18,245 \$571,160	\$13,483 67 3,370 92 10,112 75 1,686 46	\$98,566 6,403 116,196 7,298 \$228,464	\$1,919 13 479 78 1,439 35 239 89	\$14,029 912 16,538 1,039 \$32,518	\$787 65 191 91 575 74 95 96	\$5,612 365 6,615 416 \$13,008	\$260,443 18,188 307,027 19,284 \$304,942	\$104,178 6,770 122,810 7,714 \$241,472
Walla Walla.	Main Line Main Track Sidings Colfax Branch— Main Track Sidings Pendleton-Grange City Branch— Main Track Sidings Dayton Branch— Main Track Sidings Yakima Branch— Main Track Sidings Other B'ch Lines— Main Track Sidings Totals.....	42.00	67.640 8.940 8.810 1.280 32.320 10.300 5.380 .600 7.690 1.670 30.980 1.310 176.890	\$34,272 93 16,854 59 63,204 70 12,640 94 54,777 40 12,640 94 33,709 17 8,427 29 33,709 17 8,427 29 25,281 88 4,213 63	\$5,700,227 151,017 556,833 16,180 1,770,408 130,202 181,692 5,066 258,888 14,074 781,988 5,520 \$9,572,055	\$35,394 63 7,078 83 26,545 97 5,309 19 23,008 51 5,809 19 14,157 85 3,539 46 14,157 85 3,539 46 10,618 39 1,769 78	\$2,394,003 63,427 233,873 6,796 743,570 54,685 76,311 2,124 108,732 5,911 328,427 2,318 \$4,020,264	\$4,797 82 959 56 3,538 36 719 67 3,118 58 719 67 1,919 13 479 78 1,919 13 479 78 1,439 35 239 89	\$324,525 8,598 31,702 921 100,798 7,413 10,344 288 14,739 901 44,519 314 \$544,937	\$2,015 08 408 02 1,511 81 302 26 1,309 80 302 26 806 03 201 51 806 03 201 51 604 53 100 75	\$136,300 3,611 13,315 387 42,383 3,113 4,345 121 6,190 337 18,698 182 \$228,882	\$6,024,746 159,615 588,535 17,101 1,871,199 137,615 192,036 5,344 273,625 14,875 826,487 5,834 \$10,117,012	\$2,530,398 67,038 247,185 7,183 785,903 57,798 80,656 2,245 114,922 6,248 347,125 2,450 \$4,249,146
Whitman....	Main Line Main Track Sidings Colfax Branch— Main Track Sidings Lewiston Branch— Main Track Sidings Pleasant Valley Branch— Main Track Sidings Totals.....	40.20	7.180 .590 103.490 14.500 70.509 8.860 47.840 6.730	\$34,272 93 16,854 59 63,204 70 12,640 94 37,922 82 8,427 29 37,922 82 8,427 29	\$605,080 9,944 6,541,054 183,294 2,673,559 74,688 1,814,228 56,716	\$33,877 72 6,775 54 25,408 29 5,081 66 15,244 97 3,387 77 15,244 97 3,387 77	\$243,242 3,998 2,629,504 73,684 1,074,770 30,016 729,319 22,800	\$4,797 82 959 56 3,538 36 719 67 2,159 02 479 78 2,159 02 479 78	\$34,448 566 372,394 10,435 152,211 4,251 108,298 3,229	\$1,928 72 335 74 1,446 54 289 31 867 98 192 87 867 98 192 87	\$13,848 228 149,702 4,195 61,189 1,709 41,522 1,298	\$339,528 10,510 6,913,448 198,729 2,825,770 78,917 1,917,516 59,945	\$257,000 4,226 2,779,206 77,879 1,135,959 31,725 770,841 24,088

Schedule "C"—Table 1.—Steam Railroads—Continued.
OREGON-WASHINGTON RAILROAD & NAVIGATION COMPANY—Continued.

COUNTIES	CLASSIFICATION OF TRACK	REAL PROPERTY Right-of Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
		Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mile, actual value	Actual value	Equal- ized rate	Equal- ized value	Actual	Equalized value
Whitman..... (Concluded)	Other B'ch Lines—										
	Main Track	105,284 89	\$1,101,784	\$10,168 32	\$442,917	\$1,499					\$463,133
	Sidings	4,513 65	25,335	1,603 89	10,567	289					11,190
	Totals.....		\$13,086,000		\$5,250,837						\$5,550,347
Yakima.....	Yakima Branch										
	Main Track	103,709 17	\$1,406,684	\$15,506 22	\$347,075	\$1,019					\$333,914
	Sidings	8,427 29	120,679	3,876 53	55,512	479					58,672
	Other B'ch Lines—										
Totals.....	Main Track	25,281 68	70,224	11,629 68	32,330	1,439					34,171
	Sidings	4,213 65	6,784	1,988 26	3,121	289					3,299
	Totals.....		\$1,604,431		\$738,036		\$91,349		\$42,019	\$1,006,773	\$780,056
Totals.....	Main Line	60,440									
	Main Track	193,535	\$15,469,561		\$6,350,530	\$4,797 39	\$990,711		\$902,092	\$16,350,272	\$6,721,631
	2d Main Track	5,445	137,000		60,815	1,439 35	7,537		3,462	145,497	64,277
	Sidings	69,480	1,170,213		507,415	959 56	66,032		28,839	1,236,335	536,307
	Coolfax Branch										
	Main Track	187,120	9,982,618		3,988,762	3,598 36	565,432		227,087	10,498,100	4,215,849
	Sidings	34,590	436,365		174,529	719 67	24,843		9,986	461,202	184,422
	Pendleton-Grange										
	City Branch—										
	Main Track	56,630	3,103,140		1,230,016	3,118 56	176,008		70,057	3,279,308	1,300,045
	Sidings	14,250	179,764		72,777	719 67	10,234		4,143	180,988	79,915
	Lewiston Branch	70,500	2,073,539		1,074,770	2,159 02	152,211		61,189	2,225,770	1,153,639
	Totals.....	8,690	74,000		30,016	479 78	4,251		1,709	78,917	31,726
	Totals.....	47,940	1,614,328		739,331	2,160 02	108,298		41,623	1,667,510	770,341
	Totals.....	6,780	69,716		22,690	479 78	3,239		1,398	73,949	34,668

Yakima Branch— Main Track Sidings Dayton Branch— Main Track Sidings Pomeroy Branch— Main Track Sidings Grays Hbr. B'ch— Main Track 2d Main Track Sidings Other B'ch Lines— Main Track Sidings Totals	98.070	33,709 17	8,305,858	1,461,131	1,919 13	188,200	58,185	3,494,067	1,544,316
	24.400	8,427 29	206,626	91,809	479 78	11,706	5,232	217,332	97,131
	25.000	33,709 17	844,751	818,327	1,919 13	49,008	18,123	892,844	336,450
	4.000	8,427 29	39,271	14,612	479 78	2,236	882	41,507	15,444
	30.000	33,709 17	1,011,275	339,918	1,919 13	57,574	20,491	1,068,849	390,409
	2.880	8,427 29	23,849	8,405	479 78	1,358	479	25,207	8,884
	54.430	33,709 17	1,884,780	697,944	1,919 13	104,458	39,787	1,989,248	737,708
	1.650	12,640 94	20,858	7,924	719 67	1,187	451	22,045	8,377
	19.320	8,427 29	162,815	61,810	479 78	9,270	3,519	172,085	65,329
	175.100	25,281 88	4,426,867	1,787,034	1,439 35	232,029	101,741	4,678,886	1,888,805
EQUIPMENT (ONLY) OVER FOREIGN LINES Clarke..... Main Line (Over S.P. & S.Ry.) Main Track 2d Main Track (Over N. P. Ry.) Main Track 2d Main Track Sidings Totals	21.390	4,213 06	90,130	36,233	239 89	5,151	2,064	95,261	38,297
	1,111.820	.....	\$47,014,500	\$19,096,076	.....	\$2,676,627	\$1,057,178	\$49,691,187	\$20,183,254
	.000	.....	.....	.....	\$4,797 82	\$432	\$146	\$432	\$146
	.000	.....	.....	.....	1,439 35	180	44	130	44
	17.300	.....	.....	.....	4,797 82	83,002	27,972	83,002	27,972
	17.300	.....	.....	.....	1,439 35	24,901	8,892	24,901	8,892
	6.900	.....	.....	.....	959 56	6,621	2,231	6,621	2,231
	41.680	.....	.....	.....	.....	\$115,086	\$38,785	\$115,086	\$38,785
	40.180	.....	.....	.....	\$4,797 82	\$192,776	\$56,869	\$192,776	\$56,869
	40.180	.....	.....	.....	1,439 35	57,833	17,000	57,833	17,000
Cowlitz..... Main Line (Over N. P. Ry.) Main Track 2d Main Track Sidings Totals	7.320	.....	.....	.....	959 56	7,024	2,072	7,024	2,072
	87.630	.....	.....	.....	.....	\$257,633	\$76,001	\$257,633	\$76,001
	29.80	.....	.....	.....	.....	.....	.....	.....	.....
	40.180	.....	.....	.....	\$4,797 82	\$192,776	\$56,869	\$192,776	\$56,869
	40.180	.....	.....	.....	1,439 35	57,833	17,000	57,833	17,000
	7.320	.....	.....	.....	959 56	7,024	2,072	7,024	2,072
	87.630	.....	.....	.....	.....	\$257,633	\$76,001	\$257,633	\$76,001
	38.00	.....	.....	.....	.....	.....	.....	.....	.....
	4.690	.....	.....	.....	\$1,439 35	\$6,751	\$2,535	\$6,751	\$2,535
	1.350	.....	.....	.....	719 67	972	389	972	389
Grays Harb'r (Over N. P. Ry.) Main Track 2d Main Track Sidings Totals	12.680	.....	.....	.....	239 89	3,042	1,156	3,042	1,156
	18.720	.....	.....	.....	.....	\$10,765	\$4,000	\$10,765	\$4,000
	38.00	.....	.....	.....	.....	.....	.....	.....	.....
	4.690	.....	.....	.....	\$1,439 35	\$6,751	\$2,535	\$6,751	\$2,535
	1.350	.....	.....	.....	719 67	972	389	972	389
	12.680	.....	.....	.....	239 89	3,042	1,156	3,042	1,156
	18.720	.....	.....	.....	.....	\$10,765	\$4,000	\$10,765	\$4,000
	38.00	.....	.....	.....	.....	.....	.....	.....	.....
	4.690	.....	.....	.....	\$1,439 35	\$6,751	\$2,535	\$6,751	\$2,535
	1.350	.....	.....	.....	719 67	972	389	972	389

Schedule "C"—Table I.—Steam Railroads—Continued.

OREGON-WASHINGTON RAILROAD & NAVIGATION COMPANY—Concluded.

COUNTIES	CLASSIFICATION OF TRACK	Mileage	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
			Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Actual value	Equalized value
King.....	Main Line (Over C. M. & St. P. Ry.)											
	Main Track	15.810					\$4,797 82	\$73,455	\$2,207 00	\$68,739	\$73,455	\$68,739
	Sidings	7.160					959 56	6,870	441 40	3,100	6,870	3,100
	(Over N. P. Ry.)											
	Sidings	.820					959 56	307	441 40	141	307	141
	Totals	22.790						\$80,632		\$67,000	\$80,632	\$67,000
Lewis.....	Main Line (Over N. P. Ry.)	35.80										
	Main Track	28.430					\$4,797 82	\$136,402	\$1,717 02	\$45,832	\$136,402	\$45,832
	2d Main Track	30.870					1,439 85	44,433	516 29	15,907	44,433	15,907
	Sidings	27.210					959 56	26,110	343 52	9,347	26,110	9,347
	Branch Line— Main Track	1.530					1,439 85	2,245	516 29	304	2,245	304
	Sidings	1.200					239 89	239	35 89	108	239	108
	Totals	80.270						\$209,478		\$74,908	\$209,478	\$74,908
Pierce.....	Main Line (Over C. M. & St. P. Ry.)	45.00										
	Main Track	10.910					\$4,797 82	\$62,344	\$2,159 02	\$62,555	\$62,344	\$62,555
	Sidings	4.160					959 56	3,992	431 80	1,796	3,992	1,796
	(Over N. P. Ry.)											
	2d Main Track Sidings	26.920 9.080					4,797 82 1,439 85	129,197 83,315	2,159 02 647 71	58,121 17,242	129,197 83,315	58,121 17,242
	Totals	77.090						\$235,581		\$104,605	\$235,581	\$104,605

Spokane.....	Main Line (Over O. & M. & St. P. Ry.)	39.70	1.700						\$4,797 82	\$8,156	\$1,904 73	\$3,238	\$8,156	\$3,238
	Main Track		1.730						1,439 35	2,490	571 42	989	2,490	989
	2d Main Track.....		.120						959 56	115	380 05	46	115	46
	Sidings													
	Totals.....		3.550							\$10,761		\$4,273	\$10,761	\$4,273
Thurston.....	Main Line (Over N. P. Ry.)	40.00	25.090						\$4,797 82	\$123,256	\$1,919 13	\$49,302	\$123,256	\$49,302
	Main Track		25.200						1,439 35	36,272	575 74	14,509	36,272	14,509
	2d Main Track.....		7.200						959 56	6,909	383 82	2,764	6,909	2,764
	Sidings													
	Totals.....		58.090							\$166,437		\$66,575	\$166,437	\$66,575
Totals.....	Main Line—		166.530						\$4,797 82	\$798,980		\$301,824	\$798,980	\$301,824
	Main Track		141.930						1,439 35	204,374		74,143	204,374	74,143
	2d Main Track.....		69.470						959 56	66,661		25,478	66,661	25,478
	Sidings													
	Branch Line—													
	Main Track		6.250						1,439 35	8,996		3,369	8,996	3,369
	2d Main Track.....		1.350						719 67	972		369	972	369
	Sidings		13.880						289 80	3,330		1,259	3,330	1,259
	Totals.....		399.470							\$1,083,313		\$406,442	\$1,083,313	\$406,442
RECAPITULATION														
(Oregon-Washington Railroad & Navigation Company—														
	Track and equipment.....		1,111.820							\$2,676,627		\$1,087,178	\$2,676,627	\$1,087,178
	Equipment (only) over foreign lines.		399.470							1,083,313		406,442	1,083,313	406,442
	Totals.....		1,511.290							\$3,759,940		\$1,493,620	\$50,774,500	\$20,539,636

Schedule "C"—Table 1.—Steam Railroads—Continued.

PENINSULAR RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized value	Actual value	Equalized value
Mason.....	Main Line	37.00	15.623	\$10,000 00	\$155,230	\$8,700 00	\$67.9				\$236,657	\$87,568
	Main Track		11 240	2,000 00	22,480	740 00	8.3				34,058	12,000
	Sidings		26.808	.....	\$178,710	.....	\$66.1				\$270,710	\$100,163
Totals.....												

PUGET SOUND & BAKER RIVER RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized value	Actual value	Equalized value
Mason.....	Main Line	37.00	15.623	\$10,000 00	\$155,230	\$8,700 00	\$67.9				\$236,657	\$87,568
	Main Track		11 240	2,000 00	22,480	740 00	8.3				34,058	12,000
	Sidings		26.808	.....	\$178,710	.....	\$66.1				\$270,710	\$100,163
Totals.....												

TOTALS..... \$170,000 \$46,554

PUGET SOUND & WILLAPA HARBOR RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Actual value	Equalized value
Lewis.....	Main Line	85.80	31.310	\$15,000 00	\$409,650	\$5,370 00	\$168,135	\$254 45	\$29,884	\$341 69	\$10,008	\$499,584	\$178,833
	Main Track .....	.....	4.739	3,000 00	14,217	1,074 00	5,030	190 89	905	08 34	324	15,122	5,414
	Sidings .....	.....										
	Totals.....	.....	36.049		\$483,867		\$173,225		\$30,789		\$11,022	\$514,656	\$184,247
Pacific.....	Main Line	37.50	23.651	\$15,000 00	\$354,765	\$5,625 00	\$153,037	\$254 45	\$22,578	\$357 92	\$8,465	\$377,838	\$141,502
	Main Track .....	.....	3.724	3,000 00	11,172	1,125 00	4,189	190 89	711	71 58	267	11,863	4,456
	Sidings .....	.....										
	Totals.....	.....	27.375		\$365,937		\$157,226		\$23,289		\$8,732	\$389,221	\$145,958
Thurston....	Main Line	40.00	10.959	\$15,000 00	\$164,385	\$6,000 00	\$65,754	\$254 45	\$10,460	\$381 78	\$4,184	\$174,845	\$69,938
	Main Track .....	.....	1.925	3,000 00	5,775	1,200 00	2,310	190 89	397	76 36	147	6,142	2,457
	Sidings .....	.....										
	Totals.....	.....	12.884		\$170,160		\$68,064		\$10,827		\$4,331	\$180,987	\$72,395
Totals.....	Main Line.....	.....	65.920	\$15,000 00	\$968,800		\$366,880	\$254 45	\$22,917		\$22,882	\$1,051,717	\$389,771
	Main Track .....	.....	10.388	3,000 00	31,164		11,589	190 89	1,983		738	33,147	12,327
	Sidings .....	.....										
	Totals.....	.....	76.308		\$1,019,964		\$378,478		\$24,900		\$23,620	\$1,084,861	\$402,098

Schedule "C"—Table I.—Steam Railroads—Continued.

PULLMAN COMPANY (Equipment only).

COUNTIES	CLASSIFICA- TION OF TRACK	Ass'd ratio to actual value (Pct.)
Adams.....	40.00
Chelan.....	41.00
Clarke.....	39.70
Columbia..	36.50
Cowlitz.....	29.50
Douglas.....	40.00
Franklin.....	43.00
Grant.....	39.50
Grays Harb'r	38.00
King.....	46.00
Lewis.....	35.80
Lincoln.....	42.80
Pend Oreille..	40.00
Pierce.....	45.00
Snohomish.....	41.00
Spokane.....	39.70
Thurston.....	40.00
Walla Walla..	42.00
Whitman.....	40.20
Totals.....		.....

SEATTLE-188AQUAH ELECTRIC RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Actual value	Equalized value
King.....	Main Line	46.00	5.500	\$5,500 00	\$80,250	\$2,530 00	\$13,975			\$10,000	\$886 36	\$40,250	\$18,515
	Main Track .....	.....										

SEATTLE, PORT ANGELES & WESTERN RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Actual value	Equalized value
Oallam.....	Main Line	50.00											
	Main Track		58.082	\$12,500 00	\$668,276	\$6,250 00	\$631,638	\$4,856 00	\$231,086	\$2,177 50	\$115,543	\$894,360	\$447,181
	Sidings		6.791	2,500 00	16,977	1,250 00	8,488	871 00	5,915	486 50	2,967	22,892	11,445
	Totals.....		59.853		\$680,252		\$640,126		\$237,000		\$118,500	\$917,252	\$458,626
Jefferson..... (Track only)	Main Line	89.00											
	Main Track		9.228	\$12,500 00	\$115,350	\$4,875 00	\$44,986					\$115,350	\$44,986
	Sidings .....		.889	2,500 00	2,223	975 00	867					2,223	867
	Totals.....		10.117		\$117,573		\$45,853					\$117,573	\$45,853
	Grand Totals..		69.970		\$797,825		\$685,979		\$237,000		\$118,500	\$1,084,825	\$504,479

Schedule "C"—Table 1.—Steam Railroads—Continued.

SPOKANE & BRITISH COLUMBIA RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Actual value	Equalized value
Ferry.....	Main Line	45.50	36,400	\$6,777 26	\$127,422	\$1,718 65	\$62,539	\$241 10	\$12,416	\$155 20	\$5,649	\$149,908	\$68,208
	Main Track .....	.....	4,160	755 45	3,145	\$43 73	1,430	08 23	284	81 04	129	3,427	1,559
	Sidings .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Totals .....	.....	40,560	.....	\$140,565	.. .....	\$63,969	.....	\$12,700	.....	\$5,778	\$153,335	\$69,767

SPOKANE INTERNATIONAL RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual values (Pct.)	PERSONAL PROPERTY Equipment and Rolling Stock					TOTAL VALUATION Real and Personal Property	
			qual- ified value	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Actual value	Equalized value
Spokane.....	Main Line	39.70	127,011	\$2,332.99	\$45,310	\$226.20	\$19,365	\$542,500	\$215,306
	Main Track .....	.....	10,575	403.60	3,593	135.24	1,543	43,544	18,123
	Sidings .....	.....	213,583	.....	\$50,306	.....	\$19,963	\$386,104	\$283,519
	Totals.....	.....	.....	.....	.....	.....	.....	.....	.....
			.....	\$2,332.99	\$1,704	\$226.20	\$713	\$5,309	\$773
EQUIPMENT (ONLY) OVER FOREIGN			.....	.....	\$3,000	.....	\$20,045	\$650,000	\$234,321
Spokane.....	O.-W. R. & N.— Main Track .....	.....	.....	.....	.....	.....	.....	.....	.....
	Grand Totals.....	.....	213,583	.....	.....	.....	.....	.....	.....

SPOKANE, PORTLAND & SEATTLE RAILWAY.

COUNTIES	CLASSIFICA- TION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property			
				Rate per mle. actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mle, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Actual value	Equalized value		
Adams.....	Main Line	40.00													
	Main Track		42.132	\$95.911 21	\$4,040,981	\$83,364 48	\$1,616,372	\$4,023 40	\$169,514	\$1,609 36	\$67,306	\$4,210,445	\$1,684,178		
	Sidings		11.196	19.182 24	214,764	7,672 90	85,901	804 68	9,009	321 87	3,604	223,773	89,510		
	Totals.....		53.328		\$4,255,665		\$1,702,272		\$178,523		\$71,410	\$4,434,218	\$1,773,689		
Benton.....	Main Line	43.00													
	Main Track		64.598	\$95.911 21	\$6,193,193	\$41,241 82	\$2,663,983	\$4,023 40	\$839,883	\$1,730 06	\$111,750	\$6,455,076	\$2,775,688		
	Sidings		12.231	19.182 24	234,618	8,243 36	100,881	804 68	9,842	346 01	4,232	244,460	105,113		
	Totals.....		76.824		\$6,427,811		\$2,764,864		\$849,725		\$115,982	\$6,699,586	\$2,880,801		
Clarke.....	Main Line	33.70													
	Main Track		22.498	\$95.911 21	\$2,156,372	\$82,332 08	\$726,697	\$4,023 40	\$90,453	\$1,355 89	\$80,484	\$2,246,880	\$737,181		
	2d Main Track .....		.410	28.778 86	11,797	9,686 62	3,971	1,207 02	495	406 77	167	12,292	4,143	
	Sidings		18.808	19.182 24	360,779	6,464 41	121,588	804 68	15,134	271 18	5,100	375,913	126,683		
	Totals.....		41.701		\$2,528,948		\$852,254		\$106,087		\$35,751	\$2,635,035	\$888,007		
Franklin.....	Main Line	43.00													
	Main Track		58.150	\$95.911 21	\$5,577,237	\$41,241 82	\$2,308,212	\$4,023 40	\$233,951	\$1,730 06	\$100,608	\$5,811 193	\$2,408,815		
	Sidings		11.999	19.182 24	230,163	8,243 36	98,972	804 68	9,655	346 01	4,152	239,823	108,124		
	Totals.....		70.149		\$5,807,405		\$2,407,184		\$243,616		\$104,755	\$6,061,021	\$2,501,939		
Klickitat.....	Main Line	40.00													
	Main Track		92.238	\$95.911 21	\$8,846,658	\$83,364 48	\$3,588,663	\$4,023 40	\$871,110	\$1,609 36	\$149,444	\$9,217,768	\$3,687,107		
	Sidings		16.882	19.182 24	322,875	7,672 90	129,150	804 68	13,544	321 87	5,418	336,419	134,568		
	Branch Lines— Main Track		42.212	28.778 86	1,214,581	11,509 34	485,882	1,207 02	50,951	482 81	20,387	1,285,532	506,212		
	Sidings		3.317	9.561 12	31,314	3,886 45	12,726	402 84	1,335	160 94	534	33,149	13,260		
	Totals.....		154.899		\$10,415,928		\$4,166,871		\$436,940		\$174,776	\$10,852,868	\$4,841,147		

Schedule "C"—Table I.—Steam Railroads—Continued.

SPOKANE, PORTLAND & SEATTLE RAILWAY—Concluded.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mlie. actual value	Actual value	Equalized rate per mlie	Equalized value	Rate per mlie. actual value	Actual value	Equalized rate per mlie	Equalized value	Actual value	Equalized value
Lincoln.....	Main Line	42.50	2.107	\$95.911 21	\$202,065	\$40,762 26	\$85,886	\$4,023 40	\$8,477	\$1,709 95	\$3,608	\$210,562	\$99,489
	Main Track .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Skamania....	Main Line	40.00	40.577	\$95.911 21	\$8,891,789	\$38,364 48	\$1,556,716	\$4,023 40	\$106,268	\$1,609 26	\$65,308	\$4,055,047	\$1,622,019
	Main Track .....	.....	7.736	19,182 24	148,894	7,672 90	59,358	804 68	6,225	321 87	2,490	154,619	61,849
Spokane.....	Sidings .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Totals.....	.....	48.813	.....	\$4,040,188	.....	\$1,616,074	.....	\$169,488	.....	\$67,798	\$4,209,686	\$1,688,867
Whitman....	Main Line	39.70	34.581	\$95.911 21	\$8,316,705	\$38,076 75	\$1,316,732	\$4,023 40	\$139,133	\$1,597 29	\$65,286	\$8,455,838	\$1,871,968
	Main Track .....	.....	6.896	19,182 24	132,281	7,615 85	52,515	804 68	5,549	319 46	2,208	137,830	54,718
Totals.....	Sidings .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Totals.....	.....	41.477	.....	\$8,448,986	.....	\$1,369,247	.....	\$144,682	.....	\$67,489	\$8,598,668	\$1,938,686
Totals.....	Main Line	40.20	8.172	\$95.911 21	\$738,786	\$38,556 81	\$315,082	\$4,023 40	\$32,879	\$1,617 41	\$13,217	\$816,665	\$328,299
	Main Track .....	.....	7.529	19,182 24	144,423	7,711 26	58,056	804 68	6,068	323 48	2,435	150,451	60,498
Totals.....	Sidings .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Totals.....	.....	15.701	.....	\$823,209	.....	\$373,140	.....	\$38,947	.....	\$15,652	\$867,146	\$388,792
Totals.....	Main Line—	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Main Track .....	.....	365.088	\$95.911 21	\$35,010,756	.....	\$14,218,238	\$4,023 40	\$1,468,678	.....	\$608,446	\$36,479,429	\$14,814,739
Totals.....	2d Main Track .....	.....	.410	28,773 86	11,797	.....	3,976	1,207 02	496	.....	167	12,292	4,143
	Sidings .....	.....	98.227	19,182 24	1,738,302	.....	706,428	804 68	75,016	.....	29,684	1,868,318	736,082
Totals.....	Branch Lines—	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Main Track .....	.....	42.212	28,773 86	1,214,581	.....	486,882	1,207 02	50,961	.....	20,880	1,265,532	506,212
Totals.....	Sidings .....	.....	3.317	9,591 12	31,814	.....	12,726	402 84	1,836	.....	534	33,149	13,260
	Totals.....	.....	504.199	.....	\$38,097,250	.....	\$15,427,255	.....	\$1,596,470	.....	\$847,161	\$39,638,720	\$16,074,416

TACOMA EASTERN RAILROAD.

COUNTIES	CLASSIFICA- TION OF TRACK
Lewis.....	Main Line
	Main Track
	Sidings
	Totals.....
Pierce.....	Main Line
	Main Track
	Sidings
	Branch Lines -
	Main Track
Totals.....	Sidings
	Totals.....
Totals.....	Main Line -
	Main Track
	Sidings
	Branch Lines -
	Main Track
Totals.....	Sidings
	Totals.....

Schedule "C"—Table 1.—Steam Railroads—Continued.

THURSTON COUNTY RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock			TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value
Thurston.....	Main Line	40.00	4.225	\$7,500 00	\$36,158	\$8,000 00	\$14,475	\$4,875			\$28,804
	Main Track .....	.....	0.540	1,500 00	9,810	600 00	5,924	975			6,475
	Sidings .....	.....								
	Totals.....	.....	11.365		\$45,968		\$18,399		\$29,300		\$47,699
											\$80,399

WASHINGTON ELECTRIC RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks			TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equalized rate per mile	Actual value	Equalized value
Lewis.....	Main Line	35.80	9.250	\$7,500 00	\$69,375	\$8,000 00	\$77,075	\$27,808
	Main Track .....	.....					

WASHINGTON, IDAHO & MONTANA RAILWAY.

WASHINGTON, IDAHO & MONTANA RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Mileage	Ass'd ratio to actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Actual value	Equalized value
Whitman...	Main Line	3.550	40.20	\$22,309 29	\$74,400	\$6,092 49	\$29,945	\$6,800 16	\$22,844	\$2,757 75	\$9,188	\$97,334	\$39,125
	Main Track	2.300	.....	4,473 89	10,900	1,798 50	4,137	1,372 06	3,156	551 66	1,209	13,446	5,406
	Sidings .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Totals.....	5.850	.....	.....	\$84,700	.....	\$34,082	.....	\$26,000	.....	\$10,432	\$110,780	\$44,534

WASHINGTON WESTERN RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Mileage	Ass'd ratio to actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Actual value	Equalized value
Snohomish...	Main Line	11.119	41.60	\$7,500 00	\$88,892	\$3,120 00	\$34,651	\$461 18	\$6,128	.....	.....	.....	\$36,884
	Main Track .....	.....	.....	1,500 00	1,173	624 00	496	92 24	72	.....	.....	.....	518
	Sidings .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Totals.....	11.901	.....	.....	\$90,065	.....	\$35,179	.....	\$6,200	.....	\$6,168	\$96,765	\$37,342

Schedule "C"—Table I.—Steam Railroads—Concluded.

WATERVILLE RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock			TOTAL VALUATION Real and Personal Property	
			Mileage	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized value
Douglas.....	Main Line	40.00								
	Main Track		5.002	\$7,900 00	\$40,227	\$2,100 00	\$16,091		\$40,227	\$16,091
	Sidings		1.000	1,000 00	2,000	600 00	1,074		2,000	1,074
	Totals.....		6.702		\$42,211		\$17,165		\$42,211	\$17,165

WENATCHEE VALLEY & NORTHERN RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock			TOTAL VALUATION Real and Personal Property	
			Mileage	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized value
Chelan.....	Main Line	41.00								
	Main Track								\$128,738	\$22,778
	Sidings								7,572	8,106
	Totals.....		22.000		\$00,000		\$28,800		\$136,300	\$30,884

SCHEDULE "C"—Table II.—INTERURBAN LINES (Electric).

NAME OF ROAD	COUNTY	Ass'd ratio to actual value (Pct.)	CLASSIFICATION OF TRACK	AS REAL PROPERTY		AS PERSONAL PROPERTY		TOTAL REAL AND PERSONAL PROPERTY	
				Actual value	Equalized value	Actual value	Equalized value	Actual value	Equalized value
North Coast Power Company.....	Clarke.....	33.7	Street Railway Lines.....	.....	.....	\$159,180	\$53,644	\$159,180	\$53,644
	Lewis.....	35.8	Interurban Lines.....	\$22,080	\$7,441	15,460	5,210	37,540	12,651
			Street Railway Lines.....	.....	.....	148,720	53,242	148,720	53,242
			Interurban Lines.....	13,020	4,661	14,640	5,241	27,660	9,902
			Totals.....	\$35,100	\$12,102	\$338,000	\$117,937	\$373,100	\$129,499
Pacific Northwest Traction Company.....	King.....	46.0	Interurban Lines.....	\$334,262	\$153,761	\$55,882	\$25,706	\$390,144	\$179,467
	Snohomish..	41.6	Interurban Lines.....	719,488	299,907	120,287	50,089	839,775	349,846
	Skagit.....	27.3	Interurban Lines.....	774,429	211,419	190,222	51,961	964,651	263,350
	Whatcom...	36.0	Interurban Lines.....	279,821	100,556	63,609	24,699	347,680	125,255
			Totals.....	\$2,107,500	\$765,043	\$435,000	\$152,876	\$2,542,500	\$917,418
Puget Sound Electric Railway.....	King.....	46.0	Interurban Lines.....	\$1,814,897	\$834,623	\$209,094	\$96,188	\$2,023,491	\$930,808
	Pierce.....	45.0	Interurban Lines.....	875,608	394,021	100,908	45,408	976,509	439,429
			Totals.....	\$2,690,000	\$1,228,644	\$310,000	\$141,597	\$3,000,000	\$1,370,285
Spokane & Inland Empire Railway Co.....	Spokane....	39.7	Interurban Lines.....	\$3,271,708	\$1,298,904	\$236,508	\$105,802	\$3,508,216	\$1,404,706
	Whitman...	40.2	Street Railway Lines.....	.....	.....	1,736,800	669,510	1,736,800	669,510
			Interurban Lines.....	2,967,167	1,192,801	257,782	108,608	3,224,949	1,296,409
			Totals.....	\$6,238,875	\$2,491,705	\$2,291,085	\$808,920	\$8,530,000	\$3,290,625

Walla Walla Valley Railway Company...	Walla Walla	42.0	Interurban Lines	\$140,100	\$58,842	\$47,800	\$30,076	\$187,900	\$78,018
			Street Railway Lines.....	.....	.....	184,100	77,822	184,100	77,822
			Totals.....	\$140,100	\$58,842	\$231,900	\$97,898	\$372,000	\$155,240
Washington Water Power Company.....	Spokane....	39.7	Interurban Lines	\$885,000	\$351,245	\$119,107	\$47,285	\$1,004,107	\$398,030
			Street Railway Lines.....	.....	.....	2,545,863	1,010,720	2,545,863	1,010,720
			Totals.....	\$885,000	\$351,245	\$2,665,000	\$1,058,005	\$3,550,000	\$1,409,350
Yakima Valley Transportation Company.	Yakima.....	46.0	Interurban Lines	\$121,480	\$55,861	\$38,240	\$29,000	\$184,720	\$84,971
			Street Railway Lines.....	.....	.....	228,280	105,009	228,280	105,009
			Totals.....	\$121,480	\$55,861	\$291,520	\$134,009	\$413,000	\$189,980
Totals.....			Interurban Lines	\$12,218,145	\$4,963,562	\$1,529,482	\$510,278	\$13,747,627	\$5,573,840
			Street Railway Lines.....	.....	.....	5,002,978	1,989,447	5,002,978	1,989,447
			Grand Totals.....	\$12,218,145	\$4,963,562	\$6,532,455	\$2,500,725	\$18,750,600	\$7,563,287

SCHEDULE "C"—Table III.—STREET RAILWAYS.

NAME OF ROAD	COUNTY	Assessed ratio to actual value (Pct.)	OPERATING PROPERTY (Assessed as personal property)	
			Actual value	Equalized value
Everett Railway, Light and Water Co..	Snohomish....	41.6	\$1,275,000	\$580,400
Grays Harbor Railway and Light Co....	Grays Harbor	38.0	1,200,000	456,000
Lewiston-Clarkston Transportation Co..	Asotin.....	46.0	13,700	6,302
Loyal Railway	King.....	46.0	13,800	6,210
Olympia Light and Power Company....	Thurston.....	40.0	330,000	132,000
Pacific Traction Company.....	Pierce.....	45.0	245,500	110,475
Puget Sound Traction, Light and Power Company.	King.....	46.0	\$16,723,200	\$7,692,672
	Whatecom....	36.0	1,760,000	633,600
	Snohomish....	41.6	196,400	82,584
	Totals.....	.....	\$18,681,600	\$8,408,856
Seattle, Renton and Southern Railway..	King.....	46.0	\$1,200,000	\$552,000
Tacoma Railway and Power Company..	Pierce.....	45.0	3,600,000	1,620,000
Western Washington Power Company..	King.....	46.0	44,000	20,240
Willapa Electric Company.....	Pacific.....	37.5	108,700	40,768
Totals.....	.....	.....	\$26,712,000	\$11,888,196

**SCHEDULE "C"—Table IV.—RECAPITULATION OF STEAM
RAILROADS—VALUATIONS BY COUNTIES.**

NAME OF ROADS BY COUNTIES	Assessed ratio to actual value (Pct.)	Actual value	Equalized value
1. ADAMS	40.0		
Chicago, Milwaukee & St. Paul Railway.....		\$7,838,134	\$2,985,254
Northern Pacific Railway.....		6,604,482	2,641,773
Oregon-Washington Railroad & Navigation Co.		4,062,873	1,625,149
Pullman Company (Equipment only).....		9,586	3,814
Spokane, Portland & Seattle Railway.....		4,434,218	1,773,687
Totals.....		\$22,449,193	\$8,979,677
2. ASOTIN	46.0		
3. BENTON	43.0		
Chicago, Milwaukee & St. Paul Railway.....		\$497,978	\$214,181
Northern Pacific Railway.....		4,546,122	1,954,882
Oregon-Washington Railroad & Navigation Co.		1,808,581	777,690
Spokane, Portland & Seattle Railway.....		6,699,536	2,880,800
Totals.....		\$13,552,217	\$5,827,453
4. CHELAN	41.0		
Great Northern Railway.....		\$8,687,582	\$3,558,700
Pullman Company (Equipment only).....		3,908	1,601
Wenatchee Valley & Northern Railway.....		136,300	55,888
Totals.....		\$8,807,768	\$3,611,184
5. CLALLAM	50.0		
Little River Railroad & Logging Company.....		\$56,000	\$28,000
Milwaukee Terminals Railway.....		20,107	10,054
Seattle, Port Angeles & Western Railway.....		917,252	458,626
Totals.....		\$993,359	\$496,680
6. CLARKE	33.7		
Great Northern Railway.....		\$204,156	\$68,801
Northern Pacific Railway.....		3,181,885	1,072,295
Oregon-Washington Railroad & Navigation Co.		123,998	41,786
Pullman Company (Equipment only).....		8,603	2,899
Spokane, Portland & Seattle Railway.....		2,635,085	888,007
Totals.....		\$6,153,672	\$2,073,788
7. COLUMBIA	36.5		
Northern Pacific Railway.....		\$304,907	\$111,291
Oregon-Washington Railroad & Navigation Co.		3,516,021	1,283,348
Pullman Company (Equipment only).....		1,695	619
Totals.....		\$3,822,623	\$1,395,258
8. COWLITZ	29.5		
Great Northern Railway.....		\$459,585	\$135,578
Northern Pacific Railway.....		5,284,055	1,558,796
Oregon-Washington Railroad & Navigation Co.		257,633	76,002
Pullman Company (Equipment only).....		21,636	6,388
Totals.....		\$6,022,909	\$1,776,759

Schedule "C"—Table IV.—Continued.

NAME OF ROADS BY COUNTIES	Assessed ratio to actual value (Pct.)	Actual value	Equalized value
9. DOUGLAS	40.0		
Great Northern Railway.....		\$8,853,134	\$1,341,254
Pullman Company (Equipment only).....		917	367
Waterville Railway		42,911	17,164
Totals.....		\$8,896,962	\$1,358,785
10. FERBY	45.5		
Great Northern Railway.....		\$2,082,359	\$947,473
Spokane & British Columbia Railway.....		153,335	69,767
Totals.....		\$2,235,694	\$1,017,240
11. FRANKLIN	48.0		
Northern Pacific Railway.....		\$6,429,906	\$2,764,800
Oregon-Washington Railroad & Navigation Co.		1,422,949	611,888
Pullman Company (Equipment only).....		1,994	857
Spokane, Portland & Seattle Railway.....		6,051,021	2,601,989
Totals.....		\$13,905,870	\$5,979,534
12. GARFIELD	84.8		
Oregon-Washington Railroad & Navigation Co.		\$600,450	\$205,477
Totals.....		\$600,450	\$205,477
13. GRANT	39.5		
Chicago, Milwaukee & St. Paul Railway.....		\$3,807,964	\$1,504,146
Great Northern Railway.....		5,950,456	2,350,430
Northern Pacific Railway.....		2,651,921	1,047,509
Pullman Company (Equipment only).....		3,453	1,364
Totals.....		\$12,413,794	\$4,903,449
14. GRAYS HARBOR	33.0		
Black Hills & Northwestern Railway.....		\$29,652	\$11,268
Chicago, Milwaukee & St. Paul Railway.....		103,523	39,341
Northern Pacific Railway.....		3,609,640	1,371,663
Oregon-Washington Railroad & Navigation Co.		2,019,666	767,473
Pullman Company (Equipment only).....		5,963	2,255
Totals.....		\$5,768,419	\$2,192,000
15. ISLAND	46.0		
16. JEFFERSON	39.0		
Northern Pacific Railway.....		\$782,830	\$305,304
Seattle, Port Angeles & Western Railway.....		117,573	45,853
Milwaukee Terminals Railway.....		33,524	13,074
Totals.....		\$933,927	\$364,231
17. KING	46.0		
Canadian Pacific Railway (Equipment only).....		\$14,696	\$5,760
Chicago, Milwaukee & St. Paul Railway.....		6,970,383	3,206,376
Columbia & Puget Sound Railway.....		3,700,000	1,702,000
Great Northern Railway.....		6,374,155	2,962,111
Milwaukee Terminals Railway.....		65,891	30,310
Northern Pacific Railway.....		17,796,739	8,186,500
Oregon-Washington Railroad & Navigation Co.		1,573,902	723,995
Pullman Company (Equipment only).....		16,147	7,423
Seattle-Issaquah Electric Railway.....		40,250	18,515
Totals.....		\$36,552,163	\$16,811,965

Schedule "C"—Table IV.—Continued.

NAME OF ROADS BY COUNTIES	Assessed ratio to actual value (Pct.)	Actual value	Equalized value
18. KITSAP	42.5		
Milwaukee Terminals Railway.....		\$41,792	\$17,762
Totals.....		\$41,792	\$17,762
19. KITTITAS	38.5		
Chicago, Milwaukee & St. Paul Railway.....		\$8,352,057	\$8,215,542
Northern Pacific Railway.....		8,858,688	8,410,595
Totals.....		\$17,210,745	\$6,626,137
20. KLIKITAT	40.0		
Oregon Trunk Railway.....		\$156,560	\$62,624
Spokane, Portland & Seattle Railway.....		10,852,868	4,341,147
Totals.....		\$11,009,428	\$4,408,771
21. LEWIS	35.8		
Centralia Eastern Railroad.....		\$56,651	\$20,281
Great Northern Railway.....		367,798	131,670
Northern Pacific Railway.....		5,889,474	1,929,432
Oregon-Washington Railroad & Navigation Co.		465,225	173,711
Pullman Company (Equipment only).....		16,290	5,832
Tacoma Eastern Railroad.....		650,448	232,860
Puget Sound & Willapa Harbor Railway.....		514,656	184,247
Washington Electric Railway.....		77,075	27,593
Totals.....		\$7,557,612	\$2,705,626
22. LINCOLN	42.5		
Chicago, Milwaukee & St. Paul Railway.....		\$55,112	\$23,423
Great Northern Railway.....		6,549,127	2,783,379
Northern Pacific Railway.....		4,612,656	1,960,879
Oregon-Washington Railroad & Navigation Co.		647,545	275,207
Pullman Company (Equipment only).....		5,807	2,255
Spokane, Portland & Seattle Railway.....		210,562	89,489
Totals.....		\$12,080,309	\$5,134,132
23. MASON	37.0		
Blakely Railroad		\$174,715	\$64,645
Northern Pacific Railway.....		24,708	9,142
Peninsular Railway		270,710	100,163
Totals.....		\$470,133	\$173,950
24. OKANOGAN	40.0		
Great Northern Railway.....		\$8,946,282	\$1,578,513
Totals.....		\$8,946,282	\$1,578,513
25. PACIFIC	37.5		
Northern Pacific Railway.....		\$1,123,807	\$423,325
Oregon-Washington Railroad & Navigation Co.		779,413	292,280
Puget Sound & Willapa Harbor Railway.....		389,221	145,958
Totals.....		\$2,297,501	\$861,563

Schedule "C"—Table IV.—Continued.

NAME OF ROADS BY COUNTIES	Assessed ratio to actual value (Pct.)	Actual value	Equalized value
26. PEND OREILLE	40.6		
Great Northern Railway.....		\$1,518,771	\$916,621
Chicago, Milwaukee & St. Paul Railway.....		2,504,648	1,016,887
Pullman Company (Equipment only).....		923	375
Totals.....		\$4,024,342	\$1,933,883
27. PIERCE	45.0		
Chicago, Milwaukee & St. Paul Railway.....		\$1,820,783	\$819,352
Great Northern Railway.....		472,757	212,741
Milwaukee Terminals Railway.....		295,787	133,104
Northern Pacific Railway.....		10,536,436	4,741,396
Oregon-Washington Railroad & Navigation Co.		579,719	260,874
Pullman Company (Equipment only).....		23,540	10,593
Tacoma Eastern Railroad.....		2,357,744	1,065,485
Totals.....		\$16,096,766	\$7,243,545
28. SAN JUAN	39.5		
29. SKAGIT	27.8		
Canadian Pacific Railway (Equipment only)....		\$16,670	\$4,551
Great Northern Railway.....		4,595,916	1,254,686
Northern Pacific Railway.....		3,133,732	855,509
Puget Sound & Baker River Railway.....		186,678	50,963
Totals.....		\$7,932,996	\$2,165,708
30. SKAMANIA	40.0		
Spokane, Portland & Seattle Railway.....		\$4,209,666	\$1,693,866
Totals.....		\$4,209,666	\$1,693,866
31. SNOHOMISH	41.6		
Canadian Pacific Railway (Equipment only)....		\$24,178	\$10,068
Chicago, Milwaukee & St. Paul Railway.....		760,921	316,543
Great Northern Railway.....		10,322,687	4,294,217
Marysville & Arlington Railway.....		154,852	64,418
Marysville & Northern Railway.....		88,200	36,691
Northern Pacific Railway.....		7,591,255	3,157,963
Pullman Company (Equipment only).....		8,233	1,345
Washington Western Railway.....		89,705	37,342
Totals.....		\$19,035,041	\$7,918,576
32. SPOKANE	39.7		
Chicago, Milwaukee & St. Paul Railway.....		\$2,006,410	\$796,545
Great Northern Railway.....		7,668,051	3,044,216
Northern Pacific Railway.....		8,467,243	3,361,496
Oregon-Washington Railroad & Navigation Co.		6,490,658	2,576,791
Pullman Company (Equipment only).....		13,402	5,321
Spokane International Railway.....		590,000	234,230
Spokane, Portland & Seattle Railway.....		3,598,668	1,426,666
Totals.....		\$28,829,432	\$11,445,234

Schedule "C"—Table IV.—Concluded.

NAME OF ROADS BY COUNTIES	Assessed ratio to actual value (Pct.)	Actual value	Equalized value
33. STEVENS	31.5		
Great Northern Railway.....		\$4,396,926	\$1,385,082
Totals.....		\$4,396,926	\$1,385,082
34. THURSTON	40.0		
Black Hills & Northwestern Railway.....		\$120,848	\$48,339
Centralia Eastern Railway.....		11,712	4,685
Chicago, Milwaukee & St. Paul Railway.....		1,068,775	435,510
Great Northern Railway.....		239,949	95,980
Northern Pacific Railway.....		5,604,056	2,241,622
Oregon-Washington Railroad & Navigation Co.		771,879	308,552
Pullman Company (Equipment only).....		18,808	7,321
Puget Sound & Willapa Harbor Railway.....		180,987	72,895
Thurston County Railway.....		75,898	30,859
Totals.....		\$8,111,907	\$3,244,863
35. WAHIAKUM	35.0		
36. WALLA WALLA	42.0		
Northern Pacific Railway.....		\$4,331,581	\$1,819,264
Oregon-Washington Railroad & Navigation Co.		10,117,012	4,249,145
Pullman Company (Equipment only).....		24,165	10,149
Totals.....		\$14,472,758	\$6,078,558
37. WHATOOM	36.0		
Bellingham & Northern Railway.....		\$1,384,000	\$498,240
Canadian Pacific Railway (Equipment only)....		16,456	5,924
Great Northern Railway.....		3,368,249	1,212,870
Milwaukee Terminals Railway.....		25,399	9,144
Northern Pacific Railway.....		3,833,979	1,380,196
Totals.....		\$8,627,983	\$3,106,074
38. WHITMAN	40.2		
Chicago, Milwaukee & St. Paul Railway.....		\$5,328,308	\$2,141,960
Northern Pacific Railway.....		3,441,876	1,383,634
Oregon-Washington Railroad & Navigation Co.		13,831,708	5,560,247
Pullman Company (Equipment only).....		10,083	4,053
Spokane, Portland & Seattle Railway.....		967,146	388,793
Washington, Idaho & Montana Railway.....		110,780	44,584
Totals.....		\$23,680,901	\$9,523,341
39. YAKIMA	46.0		
Chicago, Milwaukee & St. Paul Railway.....		\$173,809	\$79,994
Northern Pacific Railway.....		8,407,727	3,897,554
Oregon-Washington Railroad & Navigation Co.		1,695,773	780,056
Totals.....		\$10,277,309	\$4,727,604
GRAND TOTALS		\$341,917,939	\$138,653,188

SCHEDULE "C"—Table V.—RECAPITULATION OF STEAM RAILROADS—VALUATIONS BY RAILROADS—YEAR 1916.

NAMES OF ROADS	REAL PROPERTY Right-of-Way and Tracks		PERSONAL PROPERTY Equipment and Rolling Stock		TOTAL VALUATION Real and Personal Property	
	Actual value	Equalized value	Actual value	Equalized value	Actual value	Equalized value
1 Bellingham &	\$1,175,826	\$422,300	\$208,144	\$74,932	\$1,383,970	\$497,232
2 Black Hills &	100,000	20,506	50,000	19,804	150,000	39,810
3	192,715	45,404	52,000	19,240	244,715	64,044
4 .....	.....	.....	72,000	27,298	72,000	27,298
5	67,023	24,473	1,340	433	68,363	24,906
6	26,225,475	14,800,788	4,888,425	1,384,232	31,113,903	16,185,020
7	2,431,000	1,678,536	208,400	123,433	2,639,400	1,801,969
8	62,023,235	24,708,601	8,014,030	3,145,273	70,037,265	27,853,874
9	43,400	21,700	12,600	6,300	56,000	28,000
10	126,302	53,722	18,500	7,000	144,802	60,722
11	52,300	21,840	35,700	14,851	88,000	36,691
12	237,300	127,126	195,000	89,322	432,300	216,448
13	105,407,180	42,938,944	21,147,465	8,617,333	126,554,645	51,556,277
14	162,000	60,800	4,600	1,824	166,600	62,624
15	47,014,500	19,096,070	3,789,948	1,498,020	50,804,448	20,594,090
16	176,710	65,123	92,000	34,040	268,710	99,163
17	170,323	46,534	16,180	4,400	186,503	50,933
18	1,019,984	373,473	64,900	23,020	1,084,884	402,093
19 .....	.....	.....	189,000	74,771	189,000	74,771
20	30,250	13,915	10,000	4,000	40,250	17,915
21	737,225	265,970	237,000	113,500	974,225	379,470
22	140,000	62,000	12,700	5,778	152,700	67,778
23	638,000	213,546	52,000	20,045	690,000	233,591
24	23,037,350	15,427,256	1,593,470	647,161	24,630,826	16,074,416
25	2,223,142	924,320	730,000	314,026	2,953,142	1,238,352
26	45,840	19,300	39,900	11,900	85,740	31,200
27	60,375	24,636	7,700	2,737	68,075	27,373
28	34,730	14,022	22,000	10,432	56,730	24,464
29	34,605	14,179	5,200	2,128	39,805	16,307
30	42,911	17,165	.....	.....	42,911	17,165
31	30,000	10,600	40,300	15,023	70,300	25,623
Totals.....	\$200,372,889	\$83,380,347	\$41,009,110	\$16,610,022	\$241,381,999	\$99,990,369

SCHEDULE "C"—Table VI.—RECAPITULATION OF ELECTRIC RAILWAYS—VALUATIONS BY COUNTIES.

NAME OF ROADS BY COUNTIES	Assessed ratio to actual value (Pct.)	Actual value	Equalized value
ASOTIN	46.0		
Lewiston-Clarkston Transportation Company.....		\$13,700	\$6,302
Totals.....		\$13,700	\$6,302
CLARKE	38.7		
North Coast Power Company.....		\$196,720	\$66,295
Totals.....		\$196,720	\$66,295
GRAYS HARBOR	38.0		
Grays Harbor Railway & Light Company.....		\$1,200,000	\$456,000
Totals.....		\$1,200,000	\$456,000
KING	46.0		
Loyal Railway		\$13,500	\$6,210
Pacific Northwest Traction Company.....		390,144	179,467
Puget Sound Electric Company.....		2,023,491	930,806
Puget Sound Traction, Light & Power Co.....		16,723,200	7,692,672
Seattle, Renton & Southern Railway.....		1,200,000	552,000
Western Washington Power Company.....		44,000	20,240
Totals.....		\$20,394,335	\$9,381,395
LEWIS	35.8		
North Coast Power Company.....		\$176,380	\$63,144
Totals.....		\$176,380	\$63,144
PACIFIC	37.5		
Willapa Electric Company.....		\$108,700	\$40,763
Totals.....		\$108,700	\$40,763
PIEROE	45.0		
Pacific Traction Company.....		\$245,500	\$110,475
Puget Sound Electric Company.....		976,509	439,429
Tacoma Railway & Power Company.....		3,600,000	1,620,000
Totals.....		\$4,822,009	\$2,169,904
SKAGIT	27.8		
Pacific Northwest Traction Company.....		\$264,651	\$263,350
Totals.....		\$264,651	\$263,350
SNOHOMISH	41.6		
Everett Railway, Light & Water Company.....		\$1,275,000	\$530,400
Pacific Northwest Traction Company.....		839,775	349,346
Puget Sound Traction, Light & Power Co.....		198,400	82,584
Totals.....		\$2,313,175	\$962,280

Schedule "C"—Table VI.—Concluded.

NAME OF ROADS BY COUNTIES	Assessed ratio to actual value (Pct.)	Actual value	Equalized value
SPOKANE	39.7		
Spokane & Inland Empire Railroad Company..	.....	\$5,275,101	\$2,094,216
Washington Water Power Company.....	.....	3,550,000	1,409,350
Totals.....	.....	\$8,825,101	\$3,503,566
THURSTON	40.0		
Olympia Light & Power Company.....	.....	\$330,000	\$132,000
Totals.....	.....	\$330,000	\$132,000
WALLA WALLA	42.0		
Walla Walla Valley Railway Company.....	.....	\$372,000	\$156,240
Totals.....	.....	\$372,000	\$156,240
WHATCOM	36.0		
Pacific Northwest Traction Company.....	.....	\$347,980	\$125,255
Fuget Sound Traction, Light & Power Co....	.....	1,780,000	633,600
Totals.....	.....	\$2,107,980	\$758,855
WHITMAN	40.2		
Spokane & Inland Empire Railroad Company..	.....	\$3,224,800	\$1,296,400
Totals.....	.....	\$3,224,800	\$1,296,400
YAKIMA	46.0		
Yakima Valley Transportation Company.....	.....	\$413,000	\$189,900
Totals.....	.....	\$413,000	\$189,900
GRAND TOTALS.....	.....	\$45,462,600	\$19,446,483

SCHEDULE "C"—Table VII.—TELEGRAPH COMPANIES.

COUNTIES	Assessed ratio to actual value (Pct.)	WESTERN UNION TELEGRAPH COMPANY				POSTAL TELEGRAPH-CABLE COMPANY				TOTAL TELEGRAPH COMPANIES			
		Wire mileage	Actual value	Equalized value	Wire mileage	Actual value	Equalized value	Wire mileage	Actual value	Equalized value	Actual value	Wire mileage	Equalized value
1 Adams	40.0	466.82	\$35,012	\$14,005	168.00	\$10,028	\$4,011	649.82	\$45,040	\$18,016			
2 Asotin													
3 Benton	43.0	259.20	19,440	8,359				259.20	19,440	8,359			
4 Obelan	41.0	287.75	21,591	8,848				287.75	21,591	8,848			
5 Olallam	50.0	76.60	5,745	2,872	46.00	2,521	1,260	122.60	8,266	4,132			
6 Clarke	33.7	2.90	210	71				2.90	210	71			
7 Oolumbia	36.5	188.79	14,159	5,168				188.79	14,159	5,168			
8 Oowiltz	29.5	865.83	27,400	8,083	180.00	9,864	2,910	545.83	87,264	10,998			
9 Douglas	40.0	74.72	5,604	2,242				74.72	5,604	2,242			
10 Ferry													
11 Franklin	48.0	416.76	31,257	13,441				416.76	31,257	13,441			
12 Garfield	34.8	16.50	1,238	481				16.50	1,238	481			
13 Grant	39.5	281.28	17,346	6,852	162.00	9,877	3,508	308.28	26,223	10,358			
14 Grays Harbor	38.0	169.86	12,740	4,841				169.86	12,740	4,841			
15 Island													
16 Jefferson	39.0	65.75	4,981	1,923				121.75	8,000	3,120			
17 King	46.0	1,287.00	96,070	43,732	431.45	23,643	10,876	1,699.05	118,713	54,608			
18 Kitsap	42.5	51.00	3,825	1,626	22.00	1,206	513	73.00	5,081	2,189			
19 Kittitas	38.5	466.70	35,003	13,476	279.00	15,289	5,890	745.70	50,292	19,362			
20 Klickitat													
21 Lewis	35.9	852.90	26,423	9,459	180.00	9,864	3,531	532.90	36,287	12,980			
22 Lincoln	42.5	452.96	33,927	14,419	45.00	2,466	1,048	497.96	36,393	15,467			
23 Mason													
24 Okanogan													
25 Pacific	37.5	65.46	4,910	1,841				65.46	4,910	1,841			
26 Pend Oreille	40.6	89.00	6,675	2,710				89.00	6,675	2,710			
27 Pierce	45.0	641.23	48,092	21,641	241.00	13,207	5,943	882.23	61,299	27,584			
28 San Juan													
29 Skagit	27.8	313.80	23,535	6,425	102.00	5,590	1,526	415.80	29,125	7,951			
30 Skamania													
31 Snohomish	41.0	565.05	42,379	17,630	258.00	18,864	5,767	818.05	56,243	23,397			
32 Spokane	39.7	981.22	73,592	29,216	189.00	7,617	3,024	1,120.22	81,209	32,240			
33 Stevens													
34 Thurston	40.0	353.13	26,486	10,594	152.00	8,329	3,332	505.13	34,814	13,926			
35 Wabkiakum													
36 Walla Walla	42.0	552.95	41,471	17,418				552.95	41,471	17,418			
37 Whatcom	36.0	164.65	12,849	4,446	117.00	6,411	2,308	161.65	18,760	6,754			
38 Whitman	40.2	976.55	73,241	29,443				976.55	73,241	29,443			
39 Yakima	46.0	339.98	25,499	11,730				339.98	25,499	11,730			
Totals		10,255.14	\$769,139	\$312,942	2,568.45	\$141,845	\$56,668	12,843.59	\$910,984	\$369,580			

**SCHEDULE "D"—Abstract Showing Total Assessment of All Taxable Property in the State of Washington
for the Year 1916.**

COUNTIES		Aggregate value of taxable per- sonal property (exclusive of steam railroads, electric railways and telegraph lines) as equalized by county boards	Aggregate value
1	Adams	\$1,915,945	\$20,273,311
2	Asotin	821,320	8,585,869
3	Benton	819,825	6,275,220
4	Chelan	1,908,643	11,358,038
5	Challam	810,057	12,823,923
6	Clarke	1,024,037	10,806,430
7	Columbia	1,235,238	6,597,130
8	Cowlitz	703,869	6,678,208
9	Douglas	1,530,028	8,258,038
10	Ferry	630,075	1,777,831
11	Franklin	637,359	4,012,740
12	Garfield	901,907	3,559,530
13	Grant	1,409,824	3,327,330
14	Grays Harbor	3,356,400	24,985,021
15	Island	309,800	1,745,140
16	Jefferson	570,381	5,739,804
17	King	33,019,550	232,464,787
18	Kittas	872,409	6,107,908
19	Kittitas	1,000,835	10,879,120
20	Klickitat	1,006,031	7,824,672
21	Lewis	2,022,329	15,412,844
22	Lincoln	4,335,026	17,129,742
23	Mason	431,024	4,794,925
24	Okanogan	1,568,140	5,084,302
25	Pacific	1,495,928	10,820,309
26	Pend Oreille	574,451	3,619,657
27	Pierce	14,023,711	68,327,334
28	San Juan	345,000	1,135,835
29	Skagit	1,715,678	9,870,540
30	Skamania	375,422	3,068,555
31	Snohomish	5,325,300	25,406,490
32	Spokane	14,900,800	81,670,543
33	Stevens	1,183,169	6,301,039
34	Thurston	1,536,924	8,304,304
35	Wahkiakum	361,976	1,206,900
36	Walla Walla	4,031,302	21,404,775
37	Whatcom	3,861,028	16,923,571
38	Whitman	4,005,010	23,030,370
39	Yakima	4,418,040	23,926,400
	Total	\$724,080,347	\$701,086,313

Total

Schedule "D"—Concluded.

ACTUAL VALUES AS DETERMINED BY STATE BOARD OF EQUALIZATION					Actual value of real and per- sonal property (exclusive of steam rail- roads, electric railways and telegraph lines)	Aggregate actual value of real and per- sonal property, including steam railroads, electric railways and telegraph lines	Aggregate value of all taxable property, real and personal, including steam rail- roads, electric rail- ways and telegraph lines, as equalized by state board of equalization
COUNTIES	Steam railroads	Electric railways	Telegraph lines	Total steam rail- roads, electric railways and telegraph lines			
1 Adams	\$22,449,198		\$45,040	\$22,494,238	\$30,473,140	\$32,967,373	\$21,976,163
2 Asotin		\$13,700		13,700	9,532,802	9,536,502	3,981,589
3 Benton	13,552,217		19,440	13,571,657	16,499,407	30,071,064	12,476,484
4 Chelan	8,807,708		21,535	8,829,243	31,113,978	39,943,331	16,572,433
5 Clallam	936,359		8,206	1,001,025	27,277,968	28,279,533	11,733,199
6 Clarke	6,153,672	196,720	210	6,350,602	36,887,498	43,238,100	17,939,433
7 Columbia	3,822,623		14,159	3,836,782	18,718,808	22,555,536	9,358,312
8 Cowlitz	6,022,909		37,264	6,060,173	26,227,339	31,287,512	12,981,189
9 Douglas	3,896,932		5,604	3,902,536	24,471,762	27,374,313	11,565,065
10 Ferry	2,235,694			2,235,694	6,072,431	7,306,126	3,062,141
11 Franklin	13,905,870		31,237	13,937,107	10,314,177	24,751,304	10,249,316
12 Garfield	590,450		1,233	591,683	12,906,715	18,498,403	5,600,437
13 Grant	12,413,794		26,223	12,440,017	24,651,043	37,091,065	15,339,033
14 Grays Harbor	5,708,419	1,209,000	12,740	6,929,159	76,081,634	83,012,793	34,442,003
15 Leland					4,250,000	4,250,000	1,763,325
16 Jefferson	963,927			963,927	16,132,910	17,094,337	7,092,643
17 King	36,532,163	20,394,335	118,713	57,035,211	511,965,963	569,031,174	236,091,034
18 Kittap	41,792		5,031	46,823	16,424,437	16,471,310	6,833,947
19 Kittitas	17,210,745		50,292	17,261,037	32,075,200	49,336,297	20,469,630
20 Klickitat	11,009,423			11,009,423	23,401,667	34,411,035	14,277,159
21 Lewis	7,557,612	176,330	36,237	7,770,179	48,702,439	56,472,717	23,430,530
22 Lincoln	12,080,309		36,333	12,116,702	50,559,611	62,676,313	26,004,402
23 Mason	470,133			470,133	14,124,213	14,594,346	6,055,194
24 Okanogan	8,946,232			8,946,232	16,631,255	20,577,537	8,537,620
25 Pacific	2,297,501	108,700	4,910	2,411,111	32,844,723	35,255,334	14,627,646
26 Pend Oreille	4,024,342		6,675	4,031,017	10,330,340	14,361,357	5,958,527
27 Pierce	16,036,706	4,822,009	61,299	20,920,014	173,224,544	194,204,613	80,575,466
28 San Juan					3,749,152	3,749,152	1,555,523
29 Skagit	7,332,936	964,651	29,125	8,326,712	42,440,343	51,367,120	21,312,213
30 Skamania	4,209,006			4,209,006	8,535,042	12,744,703	5,287,779
31 Snohomish	19,035,041	2,313,176	56,243	21,404,459	74,499,495	95,903,964	39,790,551
32 Spokane	23,829,432	8,825,101	31,209	32,785,742	243,479,453	281,215,195	116,676,134
33 Stevens	4,396,926			4,396,926	24,046,973	28,443,904	11,801,376
34 Thurston	8,111,907	330,000	34,314	8,476,221	26,158,245	34,634,966	14,370,047
35 Wahkiakum					4,715,046	4,715,046	1,956,273
36 Walla Walla	14,472,753	372,000	41,471	14,886,229	60,630,397	75,567,126	31,352,901
37 Whatcom	8,627,933	2,107,930	13,760	10,749,623	57,650,567	63,406,240	28,331,333
38 Whitman	23,639,901	3,224,899	73,241	26,938,041	33,423,331	110,411,372	45,809,836
39 Yakima	10,277,399	413,000	25,499	10,715,898	61,613,343	72,334,246	30,011,473
Totals	\$341,917,939	\$45,462,600	\$910,933	\$388,291,527	\$1,991,413,435	\$2,379,705,012	\$937,339,603

SCHEDULE "E"—Abstract Showing Amount of Tax for each of following funds: State General, State School, Military, Permanent Highway, Public Highway, University of Washington, Washington State College, Cheney, Bellingham and Ellensburg Normal Schools, to be raised by each county, for the year 1916.

COUNTIES		Amount of state general tax to be paid by each county	Amount of state school tax to be paid by each county	Amount of tax for military fund to be paid by each county	HIGHWAY FUNDS		
					Amount of tax for public highway fund to be paid by each county	Amount of tax for permanent highway fund to be paid by each county	
		Rate of levy 1.85 mills	Rate of levy 2.10 mills	Rate of levy 0.20 mills	Rate of levy 1.00 mills	Rate of levy 1.50 mills	
1	Adams	\$40,656	\$46,150	\$4,395	\$21,976	\$32,964	1
2	Asotin	7,367	8,361	796	3,982	5,972	2
3	Benton	23,081	26,201	2,496	12,476	18,715	3
4	Chelan	30,659	34,802	3,314	16,572	24,859	4
5	Clallam	21,708	24,640	2,347	11,734	17,600	5
6	Clarke	83,188	97,673	3,588	17,989	26,909	6
7	Columbia	17,313	19,652	1,872	9,358	14,037	7
8	Cowlitz	24,015	27,260	2,596	12,982	19,472	8
9	Douglas	21,395	24,287	2,313	11,565	17,348	9
10	Ferry	5,609	6,367	606	3,032	4,548	10
11	Franklin	18,998	21,566	2,054	10,269	15,404	11
12	Garfield	10,361	11,761	1,120	5,601	8,401	12
13	Grant	28,470	32,317	3,078	15,389	23,064	13
14	Grays Harbor	63,718	72,328	6,888	34,442	51,663	14
15	Island	3,262	3,708	358	1,763	2,645	15
16	Jefferson	13,121	14,895	1,419	7,098	10,639	16
17	King	486,768	495,791	47,218	236,091	354,137	17
18	Kitsap	12,643	14,351	1,367	6,834	10,251	18
19	Kittitas	37,869	42,986	4,094	20,470	30,704	19
20	Klickitat	26,413	29,962	2,855	14,277	21,416	20
21	Lewis	43,346	49,204	4,686	23,431	35,146	21
22	Lincoln	48,108	54,609	5,201	26,004	39,007	22
23	Mason	11,202	12,716	1,211	6,055	9,083	23
24	Okanogan	15,795	17,929	1,708	8,538	12,806	24
25	Pacific	27,061	30,718	2,926	14,628	21,941	25
26	Pend Oreille	11,023	12,513	1,192	5,959	8,968	26
27	Pierce	149,065	169,209	16,115	80,575	120,863	27
28	San Juan	2,878	3,267	311	1,556	2,333	28
29	Skagit	39,428	44,756	4,262	21,312	31,968	29
30	Skamania	9,782	11,104	1,058	5,288	7,932	30
31	Snohomish	73,613	83,560	7,958	39,791	59,686	31
32	Spokane	215,851	245,020	23,335	116,676	175,014	32
33	Stevens	21,833	24,783	2,360	11,801	17,702	33
34	Thurston	26,585	30,177	2,874	14,370	21,555	34
35	Wahkiakum	3,619	4,108	391	1,956	2,984	35
36	Walla Walla	58,003	65,841	6,271	31,353	47,029	36
37	Whatcom	52,505	59,601	5,676	28,381	42,572	37
38	Whitman	84,748	96,201	9,162	45,810	68,715	38
39	Yakima	55,521	63,024	6,002	30,011	45,017	39
Totals.....		\$1,826,578	\$2,073,413	\$197,468	\$987,340	\$1,481,009	

Schedule "E"—Concluded.

COUNTIES		STATE INSTITUTIONS OF HIGHER EDUCATION					Total amount of tax, including state general, state school, military, permanent highway, public highway, University, Washington State College, Cheney, Bellingham and Ellensburg Normal Sch'ols, to be paid by each county	
		Amount of tax for University fund to be paid by each county	Amount of tax for Washington State College fund to be paid by each county	Amount of tax for Bellingham Normal School fund to be paid by each county	Amount of tax for Cheney Normal School fund to be paid by each county	Amount of tax for Ellensburg Normal School fund to be paid by each county		
		Rate of levy .475 mills	Rate of levy .825 mills	Rate of levy .09 mills	Rate of levy .09 mills	Rate of levy .07 mills		
1	Adams	\$10,439	\$7,142	\$1,978	\$1,978	\$1,588	\$169,216	1
2	Asotin	1,391	1,294	358	358	279	30,658	2
3	Benton	5,926	4,055	1,123	1,123	873	96,069	3
4	Chelan	7,872	5,886	1,492	1,492	1,160	127,608	4
5	Clallam	5,573	3,813	1,056	1,056	821	90,346	5
6	Clarke	8,521	5,890	1,615	1,615	1,256	138,134	6
7	Columbia	4,445	3,041	843	843	655	72,059	7
8	Cowlitz	6,166	4,219	1,168	1,168	909	99,955	8
9	Douglas	5,469	3,759	1,041	1,041	809	89,061	9
10	Ferry	1,440	985	274	274	212	23,347	10
11	Franklin	4,878	3,338	924	924	719	79,074	11
12	Garfield	2,660	1,820	504	504	392	43,124	12
13	Grant	7,310	5,001	1,385	1,385	1,077	118,496	13
14	Grays Harbor..	16,360	11,194	3,100	3,100	2,410	265,208	14
15	Island	838	573	159	159	123	13,578	15
16	Jefferson	3,369	2,305	638	638	496	54,613	16
17	King	112,143	76,730	21,248	21,248	16,527	1,817,901	17
18	Kitsap	3,246	2,221	615	615	478	52,621	18
19	Kittitas	9,723	6,658	1,842	1,842	1,433	157,616	19
20	Klickitat	6,782	4,640	1,285	1,285	999	109,984	20
21	Lewis	11,130	7,615	2,109	2,109	1,639	180,415	21
22	Lincoln	12,362	8,451	2,340	2,340	1,822	200,234	22
23	Mason	2,876	1,938	545	545	424	46,625	23
24	Okanogan	4,055	2,775	763	763	598	65,740	24
25	Pacific	6,949	4,754	1,316	1,316	1,024	112,633	25
26	Pend Oreille ..	2,890	1,987	536	536	417	45,881	26
27	Pierce	38,273	26,187	7,252	7,252	5,640	620,431	27
28	San Juan	739	506	140	140	108	11,978	28
29	Skagit	10,123	6,926	1,913	1,913	1,498	164,104	29
30	Skamania	2,512	1,719	476	476	369	40,716	30
31	Snohomish	13,901	9,381	2,581	2,581	2,035	206,387	31
32	Spokane	55,421	37,920	10,501	10,501	8,168	898,407	32
33	Stevens	5,606	3,835	1,062	1,062	826	90,870	33
34	Thurston	6,826	4,670	1,298	1,298	1,008	110,649	34
35	Wahkiakum	980	636	176	176	137	15,063	35
36	Walla Walla ..	14,898	10,190	2,822	2,822	2,195	241,419	36
37	Whatcom	13,481	9,224	2,554	2,554	1,983	213,536	37
38	Whitman	21,759	14,863	4,123	4,123	3,207	352,736	38
39	Yakima	14,255	9,754	2,701	2,701	2,102	231,088	39
Totals.....		\$468,983	\$320,865	\$88,861	\$88,861	\$69,114	\$7,602,515	

Published by courtesy of C. A. Billings.

A view showing specimens of old growth Douglas fir.

STATE OF WASHINGTON

ANNUAL REPORTS

Washington State Forester

For the Years Ending November 30, 1915,
and November 30, 1916

TO THE

State Board of Forest Commissioners

W. W. EMERY, Chairman, Napavine
C. V. SAVIDGE, Land Commissioner, Olympia
FRANK B. COLE, Tacoma PATRICK McCOY, Seattle
E. G. ENGLISH, Mt. Vernon

F. E. PAPE, Forester and Secretary, Olympia

EXPLANATORY.

This publication contains annual report by State Forester E. W. Ferris for the year ending November 30th, 1915, which report has not heretofore been published. Also annual report by State Forester F. E. Pape for the year ending November 30th, 1916, and a tabulated recapitulation of the finances and work of this department since its organization A. D. 1905.

STATE BOARD OF FOREST COMMISSIONERS.

W. W. EMERY, *Chairman*, Napavine.

PATRICK McCOY, Seattle.

E. G. ENGLISH, Mount Vernon.

FRANK B. COLE, Tacoma.

C. V. SAVIDGE, *Commissioner of Public Lands, Ex-Officio*.

OFFICE OF THE DEPARTMENT OF FORESTRY.

OLYMPIA, WASHINGTON, December 1, 1915.

***To the Honorable State Board of Forest Commissioners of the
State of Washington.***

GENTLEMEN: I have the honor of submitting herewith a
brief report covering matters of the department for the year
1915.

**E. W. FERRIS,
*State Forester and Fire Warden.***

OFFICE OF THE DEPARTMENT OF FORESTRY.

OLYMPIA, WASHINGTON, December 1, 1915.

To the Honorable State Board of Forest Commissioners of the State of Washington.

GENTLEMEN: We have the honor of submitting herewith a general report of the work of the department for the year 1915.

The season of 1915, so far as loss of standing timber is concerned, was quite successful, probably more so than any other season in the history of the department, with the exception of 1913. The estimate of the value of standing, merchantable timber destroyed is \$10,000.

In the northern portion of the state, on the west side of the Cascade range the past season was the driest ever known; in the southern portion of the state it was about the same as last season; while east of the mountains the weather conditions were not quite so bad as existed during the summer of 1914. During the summer of 1914 it was exceeding dry throughout the entire state, more so than any season in thirty years, but in the northern portion of the state, west of the Cascades, during the past summer it was much worse than during 1914. During the summer of 1915 we had much more wind than during the preceding summer, which made conditions all the more hazardous. The loss during 1915 was about one-half that of 1914.

As we view it, one reason for the decrease in losses during the season of 1915 under that of 1914, was that we had more men in the field. The result obtained by this experiment was such as to satisfy us that the number of men should be increased next season, unless weather conditions are far more favorable than they have been during the time we have been in this position. We feel that the main thing is to prevent fires from starting or gaining headway, and the only way this can be done is to have a sufficient number of men on patrol duty so that a fire can be reached by one of them in its incipency.

We believe the time is drawing near when two classes of wardens should be placed in the field. It is impossible for a warden to be looking after the controlling of forest fires and protecting the timber therefrom, and also be looking after the interests of the farmer in the matter of issuing permits. The logged off lands of our state are being rapidly cleared, and in order to do such clearing it is necessary to burn over the same, and during the summer months this cannot be legally done without first obtaining a permit. If our wardens are looking after fires which are threatening the timber it is impossible for them to properly serve the rancher who is endeavoring to clear the land and make a home for himself. Therefore we believe that there should be a warden appointed in those counties having large areas of logged off agricultural lands being cleared whose sole duty would be to look after the farmer in the matter of issuing burning permits. This warden should be stationed in what we might call the agricultural district of the county. It is in this district that the very great percentage of permits are issued. The warden who is appointed to look after fires which threaten our forests has no time to stop to issue permits when a fire is reported to him, and because of the fact that he cannot find time to issue such permit the man who is striving to clear the land is placed at a great inconvenience, and often times is compelled to wait for a week or more in order to obtain a permit. This delay in issuing permits does not tend to keep down fires, but probably results in many fires which are reported to the department by the wardens "cause unknown."

FOREST LAW VIOLATIONS.

While but few arrests were made for violations of the forest laws, we are led to believe from the reports sent in by the fire wardens, and because of the numerous fires reported "cause unknown," that many infractions of the law were made, but the guilty parties could not be apprehended. Six arrests were reported, three by fire wardens and three by U. S. forest ranger. Of the arrests reported by fire wardens, two convictions were secured, and one party was acquitted. The parties convicted were young men 15 and 17 years of age. They were fined two

dollars and costs or a total of six dollars and fifty cents, for setting fire to a bee tree, and leaving same unquenched. The party acquitted was arrested for violating the conditions under which burning permit was granted. The three arrests reported by U. S. forest ranger, were for burning without permit, and fines aggregating sixty dollars in addition to the costs were collected.

Table No. 1.

FINANCIAL STATEMENT.

Expenditures from November 30, 1914, to December 1, 1915.

EXPENDITURES, appropriations biennium 1913-14 (November 30, 1914, to April 1, 1915):			
Salary, State Forester and Fire Warden.....		\$866 68	
Traveling expenses, State Forester and Fire Warden.....		10 45	
Traveling expenses, State Forest Commissioners.....		31 70	
Office expenses		39 35	
Salary, Assistant State Forester and Fire Warden.....		500 00	
Fire fighting (men employed 1914).....		287 75	
Printing		334 33	
Total.....			\$1,870 26
Total, appropriations 1913-14.....	\$76,000 00		
Total expenditures	55,348 49		
Unexpended balance April 1, 1915.....	\$20,651 51		
EXPENDITURES, appropriations biennium 1915-16 (March 31 to December 1, 1915):			
Salary, State Forester and Fire Warden.....		\$1,333 32	
Traveling expenses, State Forester and Fire Warden.....		341 79	
General office expenses.....		41 77	
Phone, long distance, and telegraph service.....		131 50	
Postage		159 81	
Miscellaneous office and field expenses.....		57 22	
Office equipment (filing cases).....		92 20	
Traveling expenses, State Forest Commissioners.....		44 90	
Salary, Assistant State Forester and Fire Warden.....		1,000 00	
Salary, stenographer		417 50	
Per diem of fire wardens.....		12,989 44	
Per diem of fire wardens, federal patrolmen.....		4,249 16	
Expenses of fire wardens.....		* 677 41	
Fire fighting (men employed).....		7,728 80	
Transportation (men and supplies to fires).....		112 70	
Subsistence (for men employed at fires).....		489 21	
Tools and equipment		39 88	
Printing		52 55	
Total.....			\$29,909 16
Total expenditures, fiscal year, Nov. 30, 1914, to Dec. 1, 1915.....			\$31,779 42
APPROPRIATIONS, biennium 1915-16:			
Salary, State Forester and Fire Warden.....	\$4,000 00		
Fire Warden, expenses.....	65,000 00		
Printing	1,000 00		
Total.....	\$70,000 00		
Expenditures, appropriations 1915-16.....		\$29,909 16	
Balance on hand December 1, 1915.....		40,090 84	
Total.....		\$70,000 00	

* \$3.56 incurred by F. W. F. P.

Table No. 2.
PER DIEM AND EXPENSE OF FIRE WARDENS—1915.

County	FIRE WARDEN	Per Diem	Expense	Totals
Grays Harbor.....	A. J. Jackson.....	\$400 00	\$23 40	\$423 40
	P. R. McGreevey.....	157 50		157 50
	John Joyce	70 00		70 00
Clallam.....	Clyde Rhodefer	351 00		351 00
	O. H. Winters.....	327 00		327 00
Clallam and Jefferson.	E. F. Ross.....	285 00		285 00
Clallam.....	H. O. Bradshaw.....	100 00		100 00
Clarke.....	H. C. Hanly.....	355 82	6 85	362 67
Cowlitz.....	F. J. Barnard.....	379 99		379 99
	A. Allison	92 50		92 50
Ferry.....	W. J. Hall.....	400 00		400 00
Island.....	George Mitchell	342 00	8 00	350 00
Jefferson.....	A. N. Thomas.....	400 00	5 60	405 60
King.....	J. M. Digby.....	400 00	20 39	420 39
	Manly Wilbur	299 99	7 07	307 06
Kitsap.....	Oscar Sword	440 00	40 56	480 56
	W. A. Vance.....	80 00		80 00
Klickitat.....	J. R. Rankin.....	400 00	17 35	417 35
Lewis.....	C. P. Roundtree.....	454 67	85 95	540 62
	Jay Hoagland	197 50		197 50
	Robert Brown	178 70		178 70
Mason.....	W. S. Taylor.....	386 65		386 65
Pacific.....	G. G. Hicks.....	379 99	14 95	394 94
Pierce.....	S. R. Fraser.....	400 00		400 00
	E. B. Hillman.....	319 99	5 55	325 54
Pend Oreille.....	Fred W. Miles.....	400 00	30 05	430 05
	J. H. Long.....	342 00		342 00
Skagit.....	Barney Lee	458 33	112 72	571 05
	Knute Husby	262 50		262 50
	J. G. Lerch.....	150 00		150 00
Skamania.....	J. F. Sweeney.....	296 40	12 60	309 00
	T. E. Hooker.....	160 50		160 50
Snohomish.....	Fred S. Anderson.....	266 67		266 67
	J. K. Dunwoody.....	88 33	11 09	99 42
	Hugh Allan	399 67	11 65	411 32
Stevens.....	William Gillings	440 00	43 31	483 31
	Wm. Martzell	218 75		218 75
Spokane.....	C. S. Durgin.....	410 00	12 20	422 20
Thurston.....	Frank Rutledge	440 00	24 80	464 80
Wahkiakum.....	J. A. Feazle.....	206 66		206 66
	Gorden Wiest	176 67	1 75	178 42
Whatcom.....	A. W. Frost.....	398 33	34 40	427 73
State.....	O. A. Billings.....	243 33	143 61	386 94
Totals.....		\$12,989 44	\$673 85	\$13,613 29

Table No. 3.

**PER DIEM OF MEN EMPLOYED UNDER THE COOPERATIVE
AGREEMENT BETWEEN THE FEDERAL GOVERNMENT AND
STATE—1915.**

County	Fire Warden Federal Patrolman	Federal Proportion	STATE PROPORTION		Totals
			Per Diem	Expense	
Grays Harbor...	Geo. M. Landon.....	\$142 50	\$67 50	.....	\$210 00
	Fred Brotherson	142 50	52 50	.....	195 00
Clallam.....	Dan Kelley	127 50	52 50	.....	180 00
	C. B. McDonnell.....	172 50	90 00	.....	262 50
	F. E. Wayne.....	167 50	27 50	.....	195 00
Clarke.....	S. S. Campbell.....	115 00	68 75	.....	183 75
Clarke and Skamania.....	F. W. Schroeder.....	145 00	176 66	.....	321 66
Cowlitz.....	J. G. Irwin.....	142 50	90 00	.....	232 50
	R. A. Rock.....	187 50	75 00	.....	212 50
	Geo. Oyster, Sr.....	142 50	85 00	.....	227 50
Jefferson.....	Karl A. Fischer.....	187 50	90 00	.....	227 50
King.....	Dixon Schively	117 50	87 50	.....	205 00
	John B. Dano.....	188 75	90 00	.....	228 75
	T. M. Taylor.....	130 00	48 75	.....	178 75
	L. A. Frazier.....	140 00	85 00	.....	225 00
	Leslie E. Thomas.....	147 50	90 00	.....	237 50
	D. O. Kessler.....	150 00	90 00	.....	240 00
	R. A. Miller.....	152 50	90 00	.....	242 50
Lewis.....	Roy Bergman	122 50	80 00	.....	202 50
	Geo. Wasson	102 50	52 50	.....	155 00
	Robt. Brown	22 50	37 50	.....	60 00
	Jay Miller	135 00	90 00	.....	225 00
	A. F. Roundtree.....	132 50	90 00	.....	222 50
	J. T. Chilcoat.....	142 50	77 50	.....	220 00
	John Hudson	170 00	90 00	.....	260 00
Mason.....	R. B. Shafer.....	175 00	67 50	.....	242 50
	John Murray	187 50	85 00	.....	222 50
Pacific.....	M. W. Allison.....	137 50	87 50	.....	225 00
	Ben Jackson	147 50	77 50	.....	225 00
Pierce.....	R. W. Oulver.....	140 00	90 00	.....	230 00
	J. R. McHenry.....	135 00	90 00	.....	225 00
	Chas. W. Taylor.....	172 50	90 00	\$0 28	262 78
	A. M. White.....	150 00	90 00	8 30	243 30
Pend Oreille.....	J. J. Gardner.....	165 00	85 00	.....	250 00
	Andrew Gray	172 50	90 00	.....	262 50
Skagit.....	Geo. W. Cheney.....	97 50	82 50	.....	180 00
	Herman Schreiber	47 50	.....	.....	47 50
	D. O. Henry.....	95 00	90 00	.....	185 00
	Carl Russell	65 00	.....	.....	65 00
	Roy E. Atterberry.....	145 00	85 00	.....	230 00
	E. O. Perrault.....	142 50	90 00	.....	232 50
	A. F. Walders.....	122 50	77 50	.....	200 00
Skagit and Snohomish.....	John Wallace	172 50	90 00	.....	262 50
Skamania.....	L. J. Wright.....	115 00	75 00	.....	190 00
	Chas. Noble	170 00	70 00	.....	240 00
	N. N. Baxter.....	172 50	75 00	.....	247 50
	L. O. Bartlett.....	145 00	90 00	.....	235 00
Stevens.....	D. M. Downs.....	172 50	90 00	.....	262 50
	John O'Neill	172 50	90 00	.....	262 50
Thurston.....	Ed. A. Buckman.....	137 50	90 00	.....	227 50
Whatcom.....	Chas. E. Schusab.....	172 50	90 00	.....	262 50
	M. L. Dedman.....	135 00	80 00	.....	215 00
	W. J. Phillips.....	140 00	72 50	.....	212 50
Collaborator		12 00	.....	.....	12 00
Totals.....		\$7,480 75	\$4,249 16	\$3 56	\$11,733 47
Federal allotment unexpended.....		519 25			
		\$8,000 00*			

* Amount of the Federal allotment for co-operative work under the Weeks law, for year 1915.

Table No. 4.

AMOUNT EXPENDED IN PAYMENT OF MEN EMPLOYED BY FIRE
WARDENS TO PATROL AND CONTROL FOREST FIRES,
TRANSPORTATION, SUBSISTENCE, TOOLS AND EQUIPMENT
—1915.

COUNTY	Men Employed	Trans- portation	Sub- sistence	Tools and Equipment	Totals
Grays Harbor	\$56 50	.....	\$8 60	\$1 00	\$61 10
Ollallam	408 00	\$88 00	.....	95	441 95
Clarke .....	.....	.....	.....	25	25
Cowlitz	3 75	.....	.....	.....	3 75
Ferry .....	.....	.....	.....	.....	.....
Island	111 50	29 00	12 50	.....	153 00
Jefferson	388 75	.....	.....	.....	388 75
King	685 95	.....	10 55	70	697 20
Kitsap	61 35	.....	.....	.....	61 35
Klickitat	464 00	.....	98 11	.....	562 11
Lewis	310 62	.....	.....	.....	310 62
Mason	9 75	.....	.....	1 65	11 40
Pacific .....	.....	.....	.....	3 45	3 45
Pierce	127 00	.....	.....	4 85	131 85
Pend Oreille	307 50	.....	237 15	3 65	548 30
Skagit	1,169 68	2 50	.....	5 18	1,177 31
Skamania	46 75	11 50	.....	4 50	62 75
Snohomish	1,042 75	2 50	.....	2 30	1,047 55
Stevens	12 50	.....	.....	1 00	13 50
Spokane .....	.....	.....	.....	.....	.....
Thurston	123 25	.....	.....	.....	123 25
Wahkiakum .....	.....	.....	.....	.....	.....
Whatcom	2,404 25	84 20	192 80	10 40	2,691 15
Totals.....	\$7,728 80	\$112 70	\$489 21	\$89 88	\$8,410 59

Table No. 5.

**PERMITS ISSUED BY FIRE WARDENS AND FOREST RANGERS,
AND ACREAGE BURNED UNDER PERMITS—1915.**

COUNTY	For Agricultural Purposes		For Forest Protection, Out-Over Lands	
	Number Permits Issued	Number Acres Listed	Suitable for Agriculture Acres	Suitable for Re-forestation Acres
Grays Harbor	910	9,016	187	418
Ollaham	819	2,820	1,000	210
Clarke	408	2,920	.....	.....
Cowlitz	410	8,572	.....	.....
Ferry	61	602	.....	.....
Island	88	1,518	.....	.....
Jefferson	148	778	.....	500
King	1,080	15,026	700	.....
Kitsap	297	1,251	800	200
Klickitat	41	876	.....	.....
Lewis	1,801	14,440	8,700	.....
Mason	844	1,877	500	1,000
Pacific	160	1,855	200	800
Pierce	789	6,606	96	.....
Pend Oreille	581	1,524	.....	.....
Skagit	881	7,755	1,400	700
Skamania	99	501	800	.....
Snohomish	1,626	12,902	1,000	.....
Spokane	348	12,527	.....	.....
Stevens	468	8,209	.....	.....
Thurston	714	5,634	800	180
Wahkiakum	29	124	.....	.....
Whatecom	902	9,799	325	.....
Chelan	86	1,089	.....	.....
Kittitas	7	96	.....	.....
Okanogan	8	22	.....	.....
Totals.....	12,525	117,788	9,958	8,478

Table No. 6.
ACCIDENTAL FIRES, OUTSIDE THE NATIONAL FORESTS,
AREAS BURNED OVER—1915.

COUNTY	Number of Fires	Agricul- tural Acres	Reforesta- tion Acres	Total Area Acres
Grays Harbor	13	162	458	620
Clallam	36	486	290	776
Clarke	1	5		5
Cowlitz	10	55	55	110
Ferry				
Island	6	3,000		3,000
Jefferson	11	464	640	1,104
King	46	1,821	1,673	3,494
Kitsap	11	1,334	666	2,000
Klickitat	9	1,000	900	2,080
Lewis	18	450	20	470
Mason	16	120	240	360
Pacific	2	25		25
Pierce	48	2,665		2,665
Pend Oreille	21	1,190		1,190
Skamania	12	50	450	500
Skagit	38	1,363	720	2,083
Snohomish	48	2,600	1,300	3,900
Stevens	15	2,080		2,080
Spokane	3	200	150	350
Thurston	18	3,865	1,632	5,497
Wahkiakum	4	15		15
Whatcom	107	5,000	2,000	7,000
Totals.....	493	28,044	11,284	39,328

The 493 fires reported are classified as follows: Lightning, 16; railroad, 26; loggers, 67; brush-burning, 129; campers, 96; incendiary, 11; unknown, 117; and miscellaneous, 40. Of the areas burned over, 2,888 acres were listed as merchantable timber, and 610 acres as second growth.

Table No. 7.
TIMBER LOSS.

COUNTY	Board Feet Killed	Board Feet Destroyed
Grays Harbor	100,000	.....
Ollam .....	.....	100,000
Clarke .....	.....	.....
Cowlitz .....	.....	.....
Ferry .....	.....	.....
Island .....	.....	300,000
Jefferson	60,000	50,000
King	1,700,000	300,000
Kitsap .....	.....	.....
Klickitat	250,000	250,000
Lewis .....	.....	100,000
Mason .....	.....	.....
Pacific .....	.....	.....
Pierce .....	.....	100,000
Pend Oreille .....	.....	300,000
Skagit	500,000	150,000
Skamania .....	.....	.....
Snohomish	105,000	212,000
Stevens	20,000	87,000
Spokane	100,000	50,000
Thurston .....	.....	.....
Wahkiakum .....	.....	.....
Whatcom	11,000,000	4,000,000
Totals.....	13,835,000	5,949,000

The killed timber can, and no doubt will, be logged with but very little or no loss. The value of the standing merchantable timber destroyed will not exceed \$10,000, which would represent the true loss for the season.

The cooperative work of forest fire protection on the headwaters of navigable streams by the U. S. Department of Agriculture, Forest Service and state, under the Weeks law, was very successful the past season. The Federal government allotted the state \$8,000 for this work. Fifty-one Federal patrolmen were employed within the cooperative areas.

The usual voluntary cooperative working agreement between the state and Washington Forest Fire Association, was in force. The association patrolmen are commissioned state forest rangers. They issue permits to burn and exercise supervision over such burning. They cooperate with the state's forces in controlling and extinguishing forest fires.

The features of the cooperative work as carried on by the U. S. Forest Service and Washington Forest Fire Association with the state, are deemed of great importance. Unity and a

consolidation of forces are gained, where otherwise a duplication of the work of forest fire protection would be inevitable.

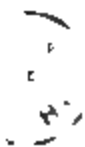
Forty-one regularly appointed fire wardens were employed during the season, in addition to a number of men engaged for patrol duty during the driest portion of the fire season. 493 fires were reported. 258 fires were listed outside the cooperative areas and 235 fires within the cooperative areas. Expenditures for fire wardens, federal patrolmen and men employed by them, together with transportation, subsistence, tools and equipment, will be found on preceding pages. These expenditures aggregate \$26,236.60 for work in the field during the fire season. Beside this, several hundred dollars of approved fire fighting claims are outstanding.

At the beginning of the season a campaign of publicity against fire and smoke was made. Thousands of letters in regard to stamping out forest fires and abating the smoke nuisance were mailed to the various women's, automobile and commercial clubs, parent teachers' associations, the newspapers, ministers and individuals. On account of the tourist travel much active interest was manifested in the fire and smoke abatement problem. As a result of this campaign, the public in general were awakened to the necessity of greater care in forest fire prevention. To this hearty and active interest, together with the increased force of patrolmen in the field and the cooperative work with the U. S. Forest Service and Washington Forest Fire Association, can be attributed the cause for the successful season during the year 1915.

The members of the State Board of Forest Commissioners gave of their time and devoted their services to the welfare of the department.

To the newspapers of the state, and all those who so generously responded in the campaign for fire and smoke prevention, and to our co-workers in the field, the department extends its sincere thanks and appreciation.

FIG. 1. Forest scene on state school land, showing old growth cedar trees.
White mark on tree indicates scale of one foot.



**REPORT OF THE FORESTER FOR YEAR ENDING
NOVEMBER 30, 1916.**

OLYMPIA, WASHINGTON, December 1, 1916.

To the State Board of Forest Commissioners.

GENTLEMEN: In accordance with the provisions of section 4, chapter 125, Laws of 1911, I herewith submit the twelfth annual report of this department. In compiling this I have endeavored to give a general review of the work, together with some suggestions and recommendations including items and subjects which are of importance to the department. I respectfully submit the same for your consideration and approval.

F. E. PAPE,
State Forester.

INTRODUCTION.

The thoughts and views expressed, in writing and preparing this report, are mainly from knowledge gained from thirty-five years of observation and experience in the woods and forest industries of western Washington, and are based on practical, rather than scientific studies of the subjects.

My appointment as Forester was made on April 15th last, at the very beginning of the fire season. I have been so thoroughly occupied with the conduct of the field work, that little time has been found to study literature on forestry and forest subjects, further than gained through current news and magazine articles. However, it will be my endeavor to acquire knowledge in all lines of forestry, and my earnest effort to advance its interests wherever found practical.

It is quite clear to me that the primary object of the forest protection law is the prevention and suppression of forest fires, particularly in the forests of state, school and other granted lands—of which there are approximately 875,000 acres—also in a general way to co-operate with other forest protective agencies in controlling fires, preventing destruction of property, and patrolling the forested areas of the state. Such has been the principal activity of this department. It is evident that the framers of this law contemplated a much wider range of activity. Section 2 makes it the duty of the Board to collect information regarding timber lands owned by the state. And again in the last paragraph of section 4, which authorizes this annual report, it makes it the duty of the Forester to gather data relative to the condition of all timber lands in the state; the amount of timber marketed or destroyed each year; to ascertain what state lands are suitable for growing timber, and also to investigate conditions of second growth timber with a view of reforestation. Little has been done in this direction except to gather information as to the quantities of all timber damaged or destroyed. The compiling of such data when reliably acquired would constitute an invaluable record.

A number of tables have been prepared depicting in classified form the important doings of the department.

Table No. 1 relates to finances and expenditures and shows the items of expense grouped under proper headings.

Table No. 2 shows the field expenses under appropriate headings, classified by counties. One-third of the total expense is returnable to the state treasury by the various counties.

Tables Nos. 3 and 4 show mainly the activities of our field forces, designated under various headings and also classified by counties. No. 3 is the fire table showing damage and losses. No. 4 shows permits, campsites, trails and arrests.

Table No. 5 shows in a more condensed form the finances and field activities since the organization of this department. It also shows the amounts expended by other co-operative agencies outside of the national forests. This table is classified by years and can be added to from year to year.

A few cuts of fire and forest views are included to add interest to the pamphlet.

PRELIMINARY WORK.

Upon assuming my duties I started on a tour of the timbered counties, meeting and making the acquaintance of many federal and association officers and rangers, also meeting and gaining acquaintance of as many as it was possible to reach of the county wardens, patrolmen and applicants for such situations; also, in a general way, getting in touch with the field duties and co-operative work.

I am very much indebted to Mr. G. C. Joy of the Washington Forest Fire Association, Mr. E. T. Allen of the Western Forestry and Conservation Association, Mr. George H. Cecil of the Federal Forest Service, and their co-workers for assistance and advice generally, and particularly in smoothing out the co-operative problems.

In making selection of wardens and patrolmen, due consideration was given previous service. No changes were made where satisfactory service had been rendered. Of the fifty-one patrol-

men employed in 1915, three were appointed county wardens, twenty-one were reappointed patrolmen, seven were denied appointment on account of unfavorable report of federal inspector, three were replaced with new men, two districts were discontinued and fifteen refused reappointment or failed to apply.

Of the forty-three wardens in 1915, twenty-one were reappointed, five were replaced with new men (three of whom had previously served the state or association), seven did not apply, and ten districts were discontinued, some of which would have been re-established had the season been dry enough to justify it.

Preference was given to property owners and settlers in or near their districts, who had telephone communication or would procure it, and effort was made to select active middle-aged men who had training in the forests and experience in fighting forest fires. Wardens were selected with the same consideration, preference being given efficient men who had automobiles or motorcycles.

They were furnished the usual supplies, blanks, laws, badges, etc., and little change was made in the instructions from those given in former years. However, they were particularly instructed that the entire time for which they claimed pay should be devoted wholly and conscientiously to the service of the state, and in furtherance of the work of this department; that there could be no divided time, such as working part of the day at home and patrolling only a few hours. Such service would not be tolerated and would result in dismissals whenever detected. This policy will be continued. Two dismissals were made in midsummer for such conduct.

They were also instructed to guard their expense carefully, and be cautious and not create needless expense to the state.

Table No. 1.
FINANCIAL STATEMENT—1916.

For Period from November 30, 1915, to December 1, 1916, Expenditures.

Salary, State Forester.....			\$1,720 26
Traveling expenses, State Forester.....			380 91
Traveling expenses, State Forest Commissioners.....			110 85
Salary, office assistant.....			1,488 33
Salary, stenographer			452 50
Salary, field assistant			352 00
Traveling expenses, field assistant.....			267 81
General office expense.....			63 99
Phone, long distance, and telegraph service.....			123 45
Postage			126 90
Office equipment			288 10
Maps			16 00
Printing			445 70
Per diem, Fire Wardens.....			12,219 98
Expenses, Fire Wardens.....			2,026 83
Per diem, Federal Patrolmen.....			4,726 50
Expenses, Federal Patrolmen.....			46 40
Field equipment			86 11
Trail work			140 50
Labor on fires (\$251.50 incurred in 1915).....			1,775 90
Transportation, account of fires.....			83 50
Subsistence, account of fires.....			112 61
Total.....			\$26,995 13
Appropriations, biennium 1915-16:			
Salary, State Forester.....	\$4,000 00		
Fire Warden, expense.....	65,000 00		
Printing	1,000 00	\$70,000 00	
Expenditures, biennium 1915-16:			
From March 31 to December 1, 1915.....	\$29,909 16		
November 30, 1915, to December 1, 1916.....	26,995 13	56,904 29	
Balance, December 11, 1916.....		13,095 71	\$70,000 00

Federal patrolmen are fire wardens employed on account of Weeks Law co-operative work with the Federal government. During the fire season of 1916, the Federal government paid the Federal patrolmen in the state service \$7,986.00, and the collaborator \$9.50, making a total of \$7,995.50.

Table No. 2.
COUNTY EXPENSES, 1916.

COUNTY	COUNTY WARDENS		FEDERAL PATROLMEN		Field Equipment	Trail Work	FIRE FIGHTING			Total
	Per Diem	Expenses	Per Diem	Expenses			Labor	Trans- portation	Sub- sistence	
Clallam	\$809 99	\$178 09	\$219 00	\$1 70	.....	.....	\$607 25	\$18 00	\$94 44	\$1,928 47
Clarke	383 83	22 95	82 50	22 20	.....	.....	6 00	.....	.....	516 98
Cowlitz	400 00	134 23	378 00	.....	\$2 80	\$20 00	.....	.....	.....	935 03
Ferry	400 00	.....	.....	.....	.....	.....	.....	.....	.....	400 00
Grays Harbor	353 23	94 91	51 00	.....	2 60	55 00	36 00	.....	*5 55	598 29
Island	349 00	35 00	.....	.....	.....	.....	.....	.....	.....	388 00
Jefferson	767 49	69 75	45 00	.....	.....	.....	74 75	.....	.....	966 99
King	823 82	88 82	540 00	.....	6 25	.....	55 00	.....	.....	1,507 89
Kitsap	398 83	86 97	.....	.....	.....	.....	.....	.....	.....	480 80
Klickitat	398 83	27 55	.....	.....	.....	.....	.....	.....	.....	420 88
Lewis	486 66	120 70	591 00	.....	2 35	.....	39 00	.....	.....	1,239 71
Mason	396 67	28 17	150 00	.....	40	.....	19 87	*2 50	.....	597 61
Pacific	380 00	48 76	222 00	.....	.....	.....	277 08	8 00	12 62	948 46
Pierce	773 83	73 15	438 00	.....	2 25	.....	47 70	5 00	.....	1,839 43
Pend Oreille	400 00	107 77	264 00	16 15	.....	.....	30 00	.....	.....	817 92
Skagit	1,187 65	260 60	578 00	.....	10 20	65 50	122 00	10 50	.....	2,179 45
Skamania	390 00	34 66	114 00	6 35	.....	.....	58 75	39 50	.....	638 26
Snohomish	790 00	148 50	349 00	.....	2 85	.....	38 75	.....	.....	1,823 10
Stevens	898 33	73 98	351 00	.....	2 41	.....	5 00	.....	.....	825 72
Spokane	400 00	96 15	.....	.....	.....	.....	16 50	.....	.....	512 65
Thurston	400 00	100 00	90 00	.....	.....	.....	.....	.....	.....	590 00
Wahkiakum	396 67	38 22	.....	.....	.....	.....	.....	.....	.....	429 89
Whatcom	808 65	168 40	270 00	.....	4 00	.....	120 75	.....	.....	1,966 80
Totals.....	\$12,219 98	\$2,026 88	\$4,726 50	\$46 40	\$36 11	\$140 50	\$1,544 40	\$93 50	\$112 61	\$20,986 83

* TW.
Field equipment tools, with but two exceptions, are stored with the County Wardens.

FINANCIAL.

Table No. 1 of this report shows the expenditures of the department for the twelve months ending December 1, 1916, grouped for specific purposes. Also, the biennial appropriation for 1915-16, the total amount expended each year out of that appropriation, and the unexpended balance December 11, 1916, amounting to \$13,095.71. There will be paid out of this balance between now and the end of the biennium approximately \$3,000.00 for office and field equipment, salaries and printing, leaving a reversion to the treasury of over \$10,000. There will also be an additional sum of \$6,978.94 returnable to the state treasury from the timbered counties (see Table 2).

A comparison of the field expenses for the years 1915 and 1916 will show a higher cost per man for the season of 1916. There are two causes for this; first, the patrolmen were allowed a wage increase of \$15.00 per month over 1915, and the wardens were allowed about the same increase on their expense items; second, the unusual dry spell extending until about October 25th necessitated keeping some of the field force on duty fully a month longer than customary.

The items "salary, field assistant, \$353.00" and "traveling expense, field assistant, \$267.81," also "trail work, \$140.50" appear for the first time in the history of this department. Aside from these items and the items of "labor at fires" and attendant expenses, which are comparatively small, the other items of expenditures will be found to be normal.

Under this heading I will also call your attention to Table No. 5, being a grouping of expenditures, finances and statistical data tabulated from the reports, files and records of this office. It will be found valuable as a reference and for comparative purposes. It shows in totals and grand totals the amounts expended by the three agencies engaged in co-operative protection of forested areas outside the national forests; also showing growth, appropriations, damage, losses, etc. Much was lacking in the earlier history, but it will be our endeavor to obtain accurate information and add to this table from time to

time items of interest and importance, with a view of making it a valuable permanent record.

PUBLICITY.

In the month of March the then acting State Forester, W. B. Bailey, prepared and sent to the railway superintendents a circular letter requesting them to prepare for the coming fire season by clearing up their rights of way and co-operating with our wardens, in suppressing fires on or adjacent to their respective roads. Also a letter to the school superintendents of the forested counties, requesting that at the exercises conducted by the public schools on arbor day, the pupils' and parents' attention be called to the work of the department and the importance of preventing fires in our forests. About the same time press notices were given out warning the public to prepare for the coming dry season.

Cautionary notices were given to the press frequently during the dry season. Much good is accomplished in this way by frequently reminding the public of the importance of preventing fires and notifying forest officers when they occur. Credit is due the press for its help and willingness to keep the public constantly warned.

On May 1st, a letter was addressed to the boards of county commissioners, urging compliance with the law in the clearing of highways. Again, on May 15th, circular letters were sent to teachers and principals of public schools, urging their assistance in creating favorable sentiment among the pupils in relation to preventing fires, warning and cautioning them when camping, picnicking, berrying, or on outings during their vacation, to be ever mindful of the destructiveness of forest fires.

A circular letter addressed to campers and fishermen was widely circulated throughout the forest areas by all the forest officers and many other individuals and transportation companies.

The chief fire warden of the Washington Forest Fire Association furnished many moving picture houses with slides de-

picting the destructiveness of forest fires, with appropriate warnings and cautions. I consider this one of the very best methods of warning the public and creating wholesome sentiment against carelessness with fire.

WEATHER CONDITIONS.

The season of 1916 was most remarkable for unusual weather. With the exception of a week or ten days, from June 12th to 20th, and a like period in the latter part of August, the entire summer months were cold and rainy. The usual equinoctial storms in September did not develop, but there were numerous showers and light rains during the early part of September, covering most of the forested area of western Washington. There were a few light rains about the same time in the forests of northeastern Washington, and in the southern portion along the Columbia river.

Commencing about September 10th and continuing until October 27th, dry weather ensued with but few exceptions over the entire state, making it necessary to keep on a portion of the force much longer than usual. This was particularly the case along the Columbia river, Hoods canal and the Straits of Juan de Fuca.

LEGISLATION.

Paragraph 3 of section 7 and paragraph 4 of section 9, chapter 125, Laws of 1911, relating to compensation of men employed to extinguish forest fires, should be amended to permit their wage to be fixed from time to time by the State Forest Board.

This department has experienced much difficulty during the past season in securing men to fight fires at the rate provided in the aforesaid paragraphs, to-wit, 25 cents per hour. Probably at the time of passage of this law, 25 cents per hour was fair compensation. However, the generally increased wage this season, with the probability in view that wages will be still higher another season, also the fact that it has handicapped our wardens in securing needed assistance, prompts me in rec-

ommending an amendment that will authorize the Board to fix the compensation in accordance with going wages for like work.

Experience this season emphasizes the necessity of amending section 16 of the aforesaid laws, so that in addition to clearing rights of way for railroads and wagon roads it will also require the clearing and burning of all refuse timber, brush and debris on rights of way for canals, ditches, pipe or wire lines, in fact, any and all rights of way, except those for and within logging operations; and that the owners of any improperly cleared right of way should be held responsible and required to clear and burn in accordance with law, with a good heavy penalty for failure to do so.

There is urgent need of laws requiring all owners of forest lands to either provide satisfactory and efficient patrol therefor or contribute their pro rata towards the maintenance of the state or private organizations engaged in the prevention of forest fires and the protection of forested lands.

There is also need of legislation requiring annual disposal of forest slashing and waste created by logging or other forest operations.

The accumulating area of such slashing is a growing nuisance and menace to the remaining forests and other intermingling property, and unless abated will some day surely cause great forest losses.

FOREST FIRES AND LOSSES.

Table No. 8 of this report shows the number of accidental fires, with the approximate loss and damage resulting therefrom, in each of the counties where wardens or patrolmen are employed. It is compiled largely from information received from the reports of men in the field, and while the figures of losses and damage are purely approximate, I believe they are substantially correct and can be relied upon as conservative.

At the time of preparing this table the complete statistics of Clallam county losses were not available. It is anticipated that final reports will show timber loss and damage greatly in excess of these figures.

The forest fire season opened in the northern counties the last week of May, requiring the attention of some of the field force. No loss of consequence resulted, but much good was accomplished in disposing of some large areas of loggers' slashing. About two weeks later, following several warm, dry days, numerous fires occurred throughout western Washington, mostly in logging works, resulting in some quite serious losses to logging operators. Only two of these fires caused noteworthy loss to standing timber, one in Pacific county killing 2,000,000 feet and destroying 1,000,000 feet, board measure, of standing timber, and the other on the Hoh river, in western Jefferson county, destroying about 4,000,000 feet of large, mature spruce timber on state land.

From June 21st to August 22d no fires of importance occurred. The weather continuing cool, with frequent light rains, kept the forests damp. Another dry period in the latter part of August developed some fires. All were kept under control with no loss to standing timber. The most serious fires during this period were in Spokane, King, Lewis, Grays Harbor and Snohomish counties; losses were principally confined to logging operations.

The next fire of note occurred in Skamania county, September 14, destroying camp property, logs and timber of the J. K. Lumber Company, and burning over about 700 acres of second growth timber.

The most destructive fire of the year, in fact, among the few serious fires in the history of Washington, occurred in Clallam county, September 20th. It originated in the works of the Puget Sound Mills and Timber Company, caused by sparks from a railway locomotive engaged in hauling logs. It burned moderately until September 27th when a brisk wind rapidly spread the fire over nearly their entire works, and drove it into adjoining standing timber, imperiling lives of workmen and destroying one entire camp, including buildings, stores and equipment of all kinds, besides damaging or destroying bridges, railway track, cars, logging donkeys, cables, tools, and many mil-

FIG. 4. An illustrated argument for providing some kind of fire guard where vast quantities of logging waste is left adjacent to green timber.

FIG. 6. A view of fire-swept green timber. Note barrenness in foreground at the right and fallen timber at the left and in background.

lion feet of sawlogs in the woods, also damaging or destroying hundreds of acres of green timber. The fire burned over some 7,000 acres, about 3,200 of which was green standing timber largely owned by the company, but which is intermingled with some state and federal forest lands. This was a ground fire, and the area of state timber burned is about 400 acres, the loss and damage to which is now being carefully estimated and determined.

It became necessary to establish fire fighting camps west of Piedmont, on Boundary creek. Several miles of fire guard were constructed, thus finally heading off the fire and preventing its further spread into valuable state and federal timber. The state and federal forest service co-operated in this work.

This fire, in particular, with all its attendant circumstances, emphasizes most forcibly the growing necessity for some well-formed plan for the annual burning of forest waste, in seasonable time and with well-planned protective preparations. Loggers and lumbermen should learn to figure the cost of annual disposal of logging waste as a fixed operating charge of primary importance. When this is done by all forest operators such losses as described above will be reduced to a minimum. Had this company made a few well-planned preparations, then fired their entire works in favorable weather, the loss could be shown in four figures instead of six.

Our attention was directed by the federal service to numerous fires originating adjacent to and on the Northern Pacific railway's mountain division. A letter was addressed to this company calling attention to the law on locomotive screens and ash pans, and if their locomotives caused fires to patrol that section of their road.

ROAD CLEARING AND SLASH BURNING.

This department has been active in the enforcement of law relative to clearing of rights of way and the disposal of fire risks. The field forces have rendered assistance to public authorities as well as private parties, and we have been ably assisted

by both the Washington Forest Fire Association and the Federal Forest Service in furtherance of this work.

In accord with your resolution of August 7th, in relation to disposal of inflammable debris adjacent to public highways, circular letters were sent to the wardens, with form of notice to be served on land owners. Reports from them indicate that such notice was served wherever fire risks were discovered and owners could be found. This activity resulted in the disposal of many hazardous accumulations of forest waste.

During the summer months, in company with other forest officers, I made a tour of many highways, inspecting faulty clearing and effecting disposal of it. In a few cases arrangements were made to appoint a suitable man to supervise the clearing at the contractor's expense.

About September 10th and following some light showers which made burning quite safe, another circular letter was forwarded to the field force, instructing them to urge all public authorities, private persons and contractors to clear up forest waste accumulated from clearing of right of way. Also, that whenever was found any hazardous forest waste that in their opinion could be disposed of with reasonable safety they should urge the owner, tenant, logger, contractor or public authorities, as the case might be, to burn or otherwise dispose of it, and when not otherwise engaged to assist them in so doing. Much good was accomplished by these efforts; thousands of acres of forest waste was burned with slight loss to adjacent timber or other property.

The state highway commissioner and many boards of county commissioners and engineers heartily co-operated with us in the enforcement of the law. However, authorities in some counties are neglectful and indifferent, permitting contractors or supervisors to leave unburned on the highways great piles of debris that, when thoroughly dry, create very dangerous risks to adjacent timber or other property.

It has been the practice of some contractors to log up great piles of timber and rubbish along roadsides, often piled up

against valuable standing timber in such manner that it is impossible to burn without destroying the trees, and with great risk of starting crown fires. There are instances where contractors have had permission to pile waste and fell trees on private property adjoining right of way. This should not be permitted, for the hazard is as great off the right of way as on, unless removed to a point where it cannot communicate with other property when fired. There are numerous instances throughout the state where expensive and destructive fires have originated from waste materials from road clearing.

This department desires to minimize such hazards and earnestly requests the co-operation of all officials dealing with this subject. The law is too plain to be misunderstood, section 16 reading as follows:

"Every one clearing right-of-way for railroad, wagon road, or other road, shall pile and burn on such right-of-way, all refuse timber, slashings, choppings and brush cut thereon, as rapidly as the clearing or cutting progresses, and the weather conditions permit, or at such other times as the forester, or of any of his assistants, or any warden may direct, and before doing so shall obtain a permit."

There is more work to be done and much room for improvement in the clearing of rights of way in many of the timbered counties. This work is often in progress during seasons when burning is either impracticable or impossible. Frequently, contractors are through and gone before our force is in the field and the burning of waste can be done with safety. There should be a law requiring authorities, in such cases, to withhold sufficient funds to insure the disposal of the waste when weather permits. We have not insisted on strict compliance of the law where right of way is being cleared through slashing or logging works, but we have insisted on all the waste material, limbs, tops and brush being piled and burned on the right of way wherever it passes through or is contiguous to unlogged, partially logged or young growth timber.

IMPROVEMENTS.

Under your direction I have purchased an adding machine, numbering machine, typewriter desk, and an automobile for the

field work next season. I have also purchased a set of metal filing cases, and will rearrange and systematize the filing of reports, documents and other papers of the office. I am also contemplating some improvement in the forms and blanks heretofore in use, all of which will be submitted for your approval at a later date.

LAW VIOLATIONS.

Decrease in wilful violations of the law has been very noticeable. Only three arrests were reported this season, all for burning without permit (see Table No. 4). This can be attributed largely to vigorous enforcement of the law by my predecessors, followed by a policy of conciliation, co-operation and good will among the rural communities.

Wardens are instructed to promote friendly sentiment by fair and impartial conduct, soliciting co-operation in fire prevention and assisting settlers and loggers in slash burning. It is gratifying to note that hostility to the forest service is rapidly decreasing.

TRESPASS.

Seven cases of trespass on state lands were reported by our wardens, patrolmen, and association rangers. One from Stevens county, of trespassers cutting wood and posts; one from King, cutting cedar bolts on section 14, township 25 north, range 7 east; one from Grays Harbor, cutting a tree for donkey engine sled; one from Cowlitz, gathering cascara bark, sections 22 and 26, township 7 north, range 1 east; one from Skagit, cutting cedar tree, section 11, township 36 north, range 8 east; one from Kitsap, cutting trees along road in section 36, township 25 north, range 1 east, and one in Pierce county, of road contractor destroying timber in section 24, township 19 north, range 9 east.

All these cases were reported and referred to State Land Commissioner Savidge for further investigation and settlement of losses.



FIG. 2. Shows man reaching the top of stub by the use of a vine maple hoop and telephone climbers. This stub is nine feet in diameter and forty feet high.

Forest scenes illustrating novel methods employed by federal and state men, assisted by settlers, in extinguishing fire in burning trees and stubs.

FIG. 3. Shows man in limbs fifty-five feet from ground. He is partially obscured by smoke. See arrow. His position was reached by felling an alder tree into the burning spruce, then ascending it. From his position thus gained water was elevated and the fire extinguished.

Over 60 trees from 6 to 8 feet in diameter were climbed and fires put out with water, besides 30 trees up to 6 feet in diameter were cut down.

These views were obtained by U. S. District Ranger Chris Morganroth, and are published by courtesy of the Federal Forest Service.

CO-OPERATION.

The co-operative work in the field was most agreeable and satisfactory from every standpoint. The state and federal service, assisted by settlers, co-operated and divided the cost of suppressing forest fire in western Jefferson county, where state, federal and private lands intermingled. And again in Clallam county, assisted by the Washington Forest Fire Association, they co-operated in holding in check two of the worst fires of the season.

The association inspectors and rangers rendered efficient service throughout their co-operative territory. They were instructed by their chief fire warden to protect state timber within their districts with the same care as private timber and to report trespass to the proper officers.

With a view to harmonious and concerted action, all of the field force representing the three agencies were instructed to consult, advise and assist each other in times of fire or other trouble.

A misunderstanding of the co-operative agreement, relating to the ratio of disbursement of the Weeks Law allotment, delayed settlement of our July payroll of Weeks Law patrolmen. However, this was later adjusted by a modification of the agreement, the terms of which were all that could be desired.

The United States rural mail carriers were instructed to get in touch with fire wardens and forest officials and report to them any fires starting along the rural mail routes.

The franking privilege was extended to the Collaborator and Weeks Law patrolmen, and blank envelopes and stationery was furnished for use in strictly federal business.

Table No. 3.
REPORT OF STATE FORESTER.
1916 FORET FIRES, OUTSIDE OF NATIONAL FORESTS, REPORTED BY STATE WARDENS AND ASSOCIATION RANGERS.

COUNTY	Number Forest Fires Listed	Campers' Fires Extin- guished	ACREAGE DAMAGED		STANDING MERCHANTABLE TIMBER			LOSSES		
			Green Timber	Second Growth	M. feet, b. m., Killed	M. feet, b. m., Destroyed	Value Stumpage Destroyed	Value Logs	Value Im- prove- ments	Value Camp Equipment
Clallam	20	.....	3,280	800	15,300	2,500	\$7,800	\$5,000	\$12,000	\$80,000
Clarke	3	4	.....	2	.....	.....	.....	.....	.....	.....
Cowlitz	7	3	.....	.....	.....	.....	.....	1,154	.....	.....
Ferry	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grays Harbor	18	3	.....	.....	20	.....	50	2,500	1,000	25
Island	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jefferson	12	.....	60	.....	255	240	480	.....	.....	.....
King	28	21	20	25	155	310	540	900	.....	4,000
Kitsap	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Klickitat	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lewis	22	17	9	20	225	100	200	3,500	.....	700
Mason	13	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pacific	3	.....	170	.....	2,200	1,025	2,050	.....	.....	25
Pierce	23	16	11	.....	100	60	180	350	25	.....
Pend Oreille	6	.....	.....	.....	.....	.....	.....	50	.....	.....
Skagit	23	3	30	.....	300	200	600	1,850	15,000	500
Skamania	9	.....	.....	800	.....	.....	.....	7,000	300	750
Snobomish	19	1	78	.....	35	750	1,500	1,770	600	.....
Stevens	6	.....	22	.....	10	.....	.....	.....	.....	.....
Spokane	2	.....	300	160	.....	.....	.....	.....	.....	.....
Thurston	13	.....	.....	.....	.....	.....	.....	2,250	900	3,000
Wahkiakum	2	.....	.....	.....	.....	100	500	.....	.....	.....
Whatcom	10	.....	20	50	.....	50	100	225	.....	.....
Totals	253	68	4,480	1,857	18,600	5,335	\$14,000	\$86,549	\$29,825	\$29,000

The 253 forest fires were classified as follows: Railroads, 6; lumbering, 90; brush burning, 60; campers, 12; incendiary, 4; unknown, 67; and miscellaneous, 8. In addition to the number of forest fires reported, there were 48 camp fires extinguished.

Table No. 4.

Permits Issued by State, Association and U. S. Forest Service, and Acreage Listed for Burning, Areas Burned for Forest Protection, and Logged-Off Lands Burned Over by Accidental Fires. Camp Sites and Trails Constructed and Opened Up by State Wardens and Association Rangers. Violations of Forest Laws Reported.

COUNTY	Number Permits Issued	NUMBER OF ACRES LISTED			Number Camp Sites	Number Miles Trails	Arrests for Burning Without Permit	
		Agricul- tural	Forest Protection	Logged-off Lands			Amount of Fine	Amount of Costs
Oallam	257	1,599	2,420	7,780	7	20		
Clarke	305	3,201		650	4	6		
Cowlitz	321	3,739	1,740	900	9	33		\$12 60
Ferry	61	603						
Grays Harbor	730	4,736	1,680	5,640	3	24		
Island	37	543		180				
Jefferson	94	313	490	375				
King	883	8,117	2,160	753	19	40		
Kitsap	168	643	1,640	210				
Klickitat	45	1,069	900	1,182				1 00
Lewis	1,384	10,311	2,650	2,527	17	23		
Mason	364	1,012	670	1,487	7	6		
Pacific	179	2,115	1,850	1,150		10		
Pierce	644	5,290	3,802	6,230	15	22		
Pend Oreille	404	2,026	60	249				
Skagit	658	6,808	4,941	3,065	11	64		
Skamania	85	751		4,563	8	11		
Snohomish	1,315	5,224	900	2,230	5	4	\$25 00	2 75
Stevens	497	2,685	585	250	1	11		
Spokane	283	10,478						
Thurston	573	4,589	678	1,415	4			
Wahkiakum	38	179	325	280		18		
Whatcom	665	5,004	380	236	7	38		
Chelan	42	1,047						
Kittitas	4	3						
Okanogan	2	3						
Totals.....	10,038	81,963	27,871	41,352	117	330	\$25 00	\$16 35

FIELD WORK AND ITS LESSONS.

This season has been exceptional in many respects, and has demonstrated the futility of fixing, either by law or rule, the season when the field work should be conducted; and also the futility of fixing a definite appropriation for carrying out this work. The appropriations should be liberal, unless the limits be so broadened as to provide for any contingency that might arise. The time to commence work and the time to quit must be governed wholly by seasonal conditions. This is the policy pursued by the association and it is the correct policy.

The present laws fix the date of closed season as June 1st to October 1st, and requires wardens to be then on duty to issue burning permits. This provision should be broadened a month, or two months, to cover reasonable possibilities. The time of beginning and terminating the field work should be left to the judgment of the State Forest Board, and Forester.

A few years ago the most destructive fires of the season occurred early in May, and this year the worst fires occurred during the closing days of the season and continued as late as October 25th.

With few exceptions the field work commenced June 1st by the wardens going on duty, followed about two weeks later by the patrolmen, which was timely, as many serious fires started up about June 13th and continued for a week or ten days.

MEETINGS.

By arrangement with the Washington Forest Fire Association and the Federal Forest Service, a series of meetings were announced to be held throughout the forested counties of the state as follows: June 14th at Montesano, 15th at Centralia, 16th at Mineral, 17th at Buckley, 19th at North Bend, 20th at Sultan and Hamilton, 21st at Deming and Arlington, 23d at Kelso, 24th at Yacolt, 26th at Northport, July 12th at Port Angeles, July 13th at Forks, and July 24th at Shelton. The conduct of these meetings being new to your Forester, they were

largely conducted by G. C. Joy of the association, assisted by E. J. Fenby, federal inspector of Weeks Law patrolmen.

All of these meetings held in the co-operative territory were well attended by the state and association men, and most of them had representatives from the federal service. A better attendance by the federal officers and rangers another year is desired.

These meetings are very essential for the proper organization of the co-operative work and should be participated in by all agencies interested in patrol and protection of the forests. Special mention is due Forest Supervisor R. L. Fromme, his assistants and rangers for their active interests at the Montezano, Port Angeles, Forks and Shelton meetings. Also, mention should be made of the attendance of four men engaged in private patrol of the J. D. Lacey Company's timber. This is a step in the right direction. All private parties maintaining patrol should instruct their men to attend these meetings. Thus is practical organization perfected and true co-operation accomplished.

Representatives of the state game and fish commission were in attendance at nearly all of these meetings to discuss the advisability of close co-operation of the forest and game departments. There appeared to be quite favorable sentiment to such a union at a few meetings, but generally it was strongly opposed, and particularly by the association men.

Your Forester attended all of the meetings but two, those at Hamilton and Deming, which were conducted by Mr. Joy and Mr. Fenby, while Mr. Wm. Entwistle, chief inspector for the association, and myself conducted meetings on the same dates at Sultan and Arlington.

These meetings were informal and those in attendance were encouraged to feel at ease, ask questions concerning their duties, make known their troubles and take part in discussions, get acquainted with each other and arrange the boundaries of their districts for convenience of patrol. I take the liberty of quoting from Inspector Fenby's report the following:

"These meetings were attended by the local forces of the state, association and forest service, and were a great benefit in promoting closer co-operation, avoiding duplication of work, settling points of law upon which the men were in doubt and giving more specific instructions to govern local conditions. All men whose territories lie along the boundaries of national forests, where there are adjacent outside patrol districts, should be in attendance, also a representative from the supervisor's office, so that arrangements for their mutual benefit can be agreed upon. The only way to perfect the co-operation between the forest service with the state and association, is by acquainting the local forces with one another."

A circular letter originating from the Forest Service, Washington, D. C., placing a ban on any form of political activity by Weeks Law patrolmen and Collaborator, was forwarded to all patrolmen and was read at all of the meetings.

SPECIAL MENTION.

Considering that the northeastern counties have been visited but few times by either state or federal forest officials, and that consequently they have had to work out their own problems largely unassisted, I feel they are entitled to special mention for their efficient work and the careful manner in which state timber and funds have been guarded.

During rainy spells when patrol was unnecessary the field men engaged in improvement work, such as preparing camp sites in safe, suitable places, building trails and short-cuts through the woods for use in case of fires. Also, posting cautionary signs and notices, advising with settlers, loggers and road contractors concerning slash burning and in creating favorable sentiment. Some of these activities are shown in Table No. 4. Noteworthy mention should be made of good work done during such weather by Association Inspector E. C. Merrifield, and Warden N. N. Baxter in Snohomish county, by gathering their rangers and patrolmen, establishing a camp and constructing a fire guard around a dangerous logging slash. This was later burned without loss to surrounding green timber. They should also be complimented for successful adjustment of a fire loss claim, by co-operating with county officials. The cost was put on the contractor responsible for the fire without cost

to the association or state. Without further special mention it should be said that the field men generally throughout the state rendered faithful and efficient service and are entitled to the thanks of this department.

AUTOMOBILES AND AEROPLANES.

Mention should be made of the growing need and use of automobiles in fire protective work. There is no longer any doubt of the increased efficiency by the use of them, particularly in counties having a fairly good system of roads.

Since 1913 the use of cars as a means of travel by our wardens has doubled each succeeding year, there being eighteen in use in 1916 (sixteen autos and two cycles). The association has also about doubled in the use of cars and expect to add more another season. The federal service is also using cars, but owing to the unimproved and mountainous character of the national forests makes the use of cars impractical in most of their territory. A motor boat patrol is maintained by both the federal service and the association, making alternate trips along Hoods Canal and tributary waters.

A man with an automobile can patrol fully twice as much territory as a man with horse, and three or four times as much as a man on foot.

The importance of reaching a fire quickly with men and tools is unquestionable. The automobile facilitates this.

A reference to Table No. 5, under heading "Men Employed" and heading "Expense Wardens," etc., will demonstrate that the expense of this department has rather been decreased than increased since the advent of cars. However, 1915 should be explained, as it was the policy of the board that year to pay increased salary with only nominal expense allowance. A more liberal allowance for expenses was made this season and many wardens were employed fully a month longer than usual.

Table No. 5.
Classified Summary of Finances and Work of Forest Protection from Its Organization to Date.

YEAR	Office Ex- penditures, Salaries, Printing and Equipment	Per Diem Wardens and Field Assistant	Expenses Wardens and Field Assistant	Extra Help Fire Fight- ing and Inspection Work	Weeks Law Patrol Paid by State	Total State Ex- penditures	Total Ex- penditures by Wash. F. F. Associa- tion	Total Ex- penditures by Fed. Gov. Weeks Law Patrol	Grand Total Expended by Three Agencies	Federal Allotment Weeks Law Patrol	State Biennial Appro- priation	Unex- pended Appro- priation
1905.....	\$3,785 50	\$908 02	735 24	\$6,846 89	.....	\$5,428 47	.....	.....	\$5,428 47	.....	\$7,500 00	.....
1906.....	4,421 66	735 24	735 24	8,846 89	.....	13,961 80	.....	.....	13,961 80	.....	26,000 00	\$2,319 25
1907.....	3,086 50	1,544 52	1,544 52	2,888 25	.....	9,454 26	.....	.....	9,454 26	.....	26,000 00	.....
1908.....	3,516 00	1,390 43	1,390 43	5,701 85	.....	13,617 30	.....	.....	13,617 30	.....	46,200 00	25 86
1909.....	7,722 00	2,304 98	2,304 98	6,206 80	.....	19,509 08	.....	.....	19,509 08	.....	76,000 00	14,572 14
1910.....	8,744 00	2,000 61	2,000 61	11,209 42	.....	26,822 48	.....	.....	26,822 48	.....	76,000 00	20,651 51
1911.....	10,758 00	3,677 64	3,677 64	17,442 11	.....	30,214 00	.....	.....	30,214 00	.....	70,000 00	13,006 71
1912.....	9,829 00	3,826 35	3,826 35	5,687 05	.....	24,311 98	.....	.....	24,311 98	.....	70,000 00	.....
1913.....	9,568 00	2,428 88	2,428 88	754 78	.....	19,308 44	.....	.....	19,308 44	.....	70,000 00	.....
1914.....	10,906 02	2,702 92	2,702 92	13,982 02	.....	36,689 10	.....	.....	36,689 10	.....	70,000 00	.....
1915.....	12,989 44	673 85	673 85	8,658 34	.....	31,779 42	.....	.....	31,779 42	.....	70,000 00	.....
1916.....	12,571 98	2,294 64	2,294 64	2,148 62	.....	26,905 18	.....	.....	26,905 18	.....	70,000 00	.....
Totals..	\$43,630 95	\$97,986 09	\$24,654 77	\$51,294 58	\$15,232 21	\$88,738 25	\$400,285 74	\$80,684 00	\$208,558 00	\$45,250 00	\$201,700 00	\$21,154 97

YEAR	Number of Arrests	Amount of Fines and Costs	Number Burning Permits Issued	Number of Fires Without Permits	Total Area Burned, All Fires, Acres	Loss and Damage, Mostly Timber	Losses Logs, im- provements and Logging Equipment	Merchant- able Timber Killed Board Feet	Merchant- able Timber Destroyed Board Feet	Number of Camp Sites Pre- pared	Number Miles of Trail Built or Opened
1905.....	3	.....	2,542	208	107,740	\$294,480 00	.....	.....	.....	.....	.....
1906.....	.....	.....	2,455	1,100	10,820	54,900 00	.....	.....	.....	.....	.....
1907.....	.....	.....	1,488	297	27,018	68,800 00	.....	.....	.....	.....	.....
1908.....	.....	.....	1,845	484	18,896	27,996 00	.....	.....	.....	.....	.....
1909.....	30	\$208 75	2,837	855	106,697	56,992 00	.....	.....	.....	.....	.....
1910.....	38	1,080 75	2,183	687	112,171	22,180 00	.....	.....	.....	.....	.....
1911.....	54	1,291 00	5,972	437	110,479	29,140 00	.....	.....	.....	.....	.....
1912.....	9	226 00	7,049	180	120,479	1,000 00	.....	.....	.....	.....	.....
1913.....	3	.....	10,480	646	200,206	86,283 00	.....	.....	.....	.....	.....
1914.....	30	458 75	12,444	681	170,647	10,000 00	.....	.....	.....	.....	.....
1915.....	6	65 50	12,925	498	157,454	14,000 00	.....	.....	.....	.....	.....
1916.....	3	41 85	10,086	221	1,108,400	\$945,510 00	\$85,374 00	680,485,000	77,900,500	117	260
Totals..	156	\$2,853 85	77,397	6,618	1,108,400	\$945,510 00	\$85,374 00	680,485,000	77,900,500	117	260

I would recommend a further increase in expense allowance another season, as the maximum allowance for expense of operating cars did not cover our wardens' actual expense no matter how careful and economical they were; besides, it creates a tendency to neglect their duties.

The use of aeroplanes for patrol has been investigated by your secretary, and from all the information at hand I would pronounce it impractical of adoption at this time. Wisconsin reports quite successful experiments with a hydro-aeroplane over a comparatively level country dotted with numerous lakes. The initial cost is \$8,000.00 to \$10,000.00, with a monthly operating expense of about \$500.00, based on two-hour trips each day of about 150 miles. At best such service would be useful only as a lookout and for reporting approximate location of fires. Our present troubles are not so much in detecting a fire as in getting men and tools to it quickly. It is quite possible that future developments of the flying machine may demonstrate its usefulness in fire protection.

FOREST ASSISTANT.

In accord with your order of May 4th last, C. P. Roundtree was appointed to assist in the supervision of the field work. He was allotted the southwestern counties, including Pierce county. It was his duty to visit the wardens and patrolmen, to assist and advise them, and report unsatisfactory work to this office. He covered his territory frequently and satisfactorily, reporting weekly, and a brief report of his work at the end of the season. This being a season of minimum fires, his service in this capacity was not as valuable as it otherwise might have been.

I recognize the importance of a few thoroughly experienced men, whom I can send out to assist their co-workers in times of serious trouble, but I question the necessity or advisability of keeping them wholly employed in a supervisory capacity. The association has several men who act in like capacity and the federal government has an inspector for Weeks Law patrol-

men, besides there is the chief fire warden of the association and myself; therefore, taking the co-operative force as a whole, I feel there is abundance of supervision and inspection. I do not wish to be understood as criticising the organization of the association; on the contrary, I think it is commendable; at the same time, there is no doubt that an economic saving could be made and much duplication avoided by an arrangement whereby one inspector or warden could have supervision and direction of all the co-operative force in his district and be jointly responsible to both the association and state. We had similar arrangement in Whatcom county this year which proved satisfactory. I think such a plan could be worked out with the association authorities and would agreeably apply in some other counties. The supervisory force should be distributed uniformly throughout the co-operative territory.

If the law being recommended for passage is enacted, then the field force will be instructed to guard all the forests alike and a much closer, more economical and efficient organization will be effected.

RECOMMENDATIONS.

The forest fire service should be equipped with camp outfits, located at convenient, central points, for emergency use in event of fires remote from settlements. Our experience in checking the forest fire west of Piedmont emphasized the need of such equipment; in this case the federal forest service loaned us one of their outfits, otherwise there would have been delay in checking the fire.

We should advocate extending the opening of hunting season for all forest game until such time as the forests are thoroughly rain soaked. Many destructive fires have been caused by careless hunters. Table No. 3 shows twelve fires were started by campers and hunters, three of which are known to have burned large areas and caused great timber loss.

I recommend furnishing all the co-operative field force with blanks for reporting forest fires and losses, also that each

warden, ranger or patrolman be instructed to confine their reports of fires occurring within their respective districts.

Encouragement and assistance should be given settlers in extending telephone communication to localities where there are large tracts of state timber lands. The importance of this is in gaining quick information of fires in remote settlements. A case in point is western Jefferson and Clallam counties; also the upper reaches of the Toutle river in Cowlitz county.

CONCLUSION.

To the State Board of Forest Commissioners, I extend my sincere thanks for kindly advice and generous gift of time in promoting the best interests of the department, and I also extend my thanks to the office force for conscientious and painstaking effort in the discharge of their duties.

FRED E. PAPE,
State Forester.

The Biennial Report


OF THE

Board of Geological Survey

OF THE

State of Washington

FOR THE TERM 1915-1917

OLYMPIA, WASH.
FRANK M. LAMBORN  PUBLIC PRINTER
1917

LETTER OF TRANSMITTAL.

To the Legislature of the State of Washington:

The Board of Geological Survey transmits herewith its biennial report for the term 1915-17, as required by statute.

Respectfully submitted,

ERNEST LISTER, *President*;
LOUIS F. HART,
EDWARD MEATH, *Secretary*;
HENRY SUZZALLO,
ERNEST O. HOLLAND.

Olympia, December 28, 1916.

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BIENNIAL REPORT OF THE BOARD OF GEOLOGICAL SURVEY

GENERAL PURPOSES OF SURVEYS.

TOPOGRAPHIC SURVEYS.

The Topographic Map.—A topographic map is designed to represent the form and slope of the surface of the land and the elevation of all points above sea level. The positions of streams, lakes and ponds, public and private roads, towns and railroads, are shown in their correct relative positions. The map indicates boundaries of counties and the position of section lines wherever there have been land surveys. In the making of the necessary surveys for such maps permanent marks, consisting of iron posts, copper bolts or tablets, are set at frequent intervals to mark the exact elevation above sea level to serve as datum points for further spirit level work, for engineering investigation, and for such public works as canals, water supply, railway and other public or private surveys.

The topographic map is made with such accuracy and in such detail that it is useful to almost every citizen. In a new state that is inviting immigration, the map is valuable in order to show the location of desirable farm lands and the general character of the country. From it the positions of streams and lakes may be seen and the possibilities of these for purposes of water power or irrigation may be largely determined. The topographic map facilitates the construction of railroads and wagon roads, since upon it available routes and grades may be laid out without the preliminary surveys ordinarily necessary for improvements of this kind. In our public schools such a map is indispensable in that it places before the children truthful maps of our commonwealth, instead of those that are glaringly inaccurate.

In the making of topographic maps the areas selected for survey are defined by lines of latitude and longitude and are

called quadrangles. Each quadrangle, and the topographic map which represents its features, is designated by the name of the most prominent place or topographic feature included within it. The scale generally used in map construction is about two miles to the inch, and on this scale the area embraced in a quadrangle is about eight hundred square miles. In Washington, the topographic map when completed will comprise, in round numbers, ninety sheets, complete and fractional, of which about thirty-eight have already been surveyed.

HYDROMETRIC SURVEYS.

Hydrometric surveys furnish a basis for determining the water resources of the state. They are essential to indicate the supply of water suitable for domestic and industrial purposes, for comprehensive development of power and irrigation projects, for navigation and flood prevention, and for wise and equitable sanitary regulation. The water supply is of more importance to the life and pursuits of the people than any other natural resource, as the health and economic development of every community are directly dependent upon the character and volume of the available supply.

Our water resources are unlike the other mineral resources in that they are continually existent. Our coal beds and mineral lodes are exhausted when mined and placed upon the market, but the water supply is constantly renewed. Therefore, failure to put water into beneficial use is an economic loss, for the energy and utility does not serve the needs of civilization effectively prior to hydraulic development.

When estimates and designs for hydraulic development are made, all essential physical details, except the stream flow, can be determined within a relatively short time. The amount of water available and its seasonal distribution can be ascertained only by a study of stream flow records extending over a series of years. Many irrigation and power projects have failed on account of being placed in operation without an adequate knowledge of stream flow. Others designed upon the basis of short time records have levied an enormous toll upon the public

through high rates made necessary by unexpected seasonal variation in flow. The run-off for streams in Washington is extremely irregular, especially in respect to the minimum flow which is the most important in considering the operation of any project. For instance, the low water period in August and September of 1915 was much lower than any other on record, likewise the lowest period in 1916 occurred in October and November, when the flow was nearly as low as in August and September, 1915, but was later in the season than shown by any previous records. Aside from the design and operation of irrigation and power projects, stream flow records are vitally essential in considering means of preventing damage from floods. Occasionally "Chinook" winds accompanied by heavy rains melt the snow in the mountains, causing disastrous floods in the lowlands. The last serious flood of this kind occurred in 1906. Unfortunately few records of stream flow were being kept then, so that very meager information is available for designing protective works, although more complete records on streams flooded less seriously in 1909 are very useful.

Hydrometric surveys cover two fields of investigation, the surface supply and the underground supply. The surface supply furnishes by far the greatest volume of water and is readily accessible in the various rivers and creeks. Gaging stations are maintained along the principal streams of the state for determining the daily flow throughout a series of years. Daily records are published and are used extensively in designing hydraulic works of all kinds. Probably the greatest ultimate benefit derived from the streams in the state will be brought about by hydro-electric development. Washington ranks first among the states in the union in respect to estimated potential water-power.*

* A report of the Commissioner of Corporations for March 14, 1912, pp. 55-56, summarizes the potential water power in each state. Washington is credited with a "minimum" potential water power of more than a million horsepower greater than for any other state. The three states having the greatest "minimum" potential water power are as follows: Washington, 4,932,000 horsepower; California, 3,424,000 horsepower; and Oregon, 3,148,000 horsepower.

The possibilities for water power development are being investigated as rapidly as possible. The records of flow indicate water supply. River profiles or level lines along the principal power streams indicate the fall, dam sites, reservoir sites, and other pertinent data. An analysis of the information is being made in a series of seven reports on the water powers of the Cascade Range, three of which are published and a fourth in preparation. These reports summarize the most reliable information obtainable and will greatly encourage hydro-electric enterprise.

Investigation of underground water supplies is equally as important as in the case of surface waters. This work includes a determination of the areas that are underlaid by water-bearing strata, of the depths at which these strata occur, and of the amount and quality of water that may be obtained. A knowledge of the existence of water-bearing strata is very necessary, not alone for the purpose of irrigation, but in some parts of Washington settlement is well-nigh impossible because not even enough water for domestic purposes has as yet been obtained.

GEOLOGICAL SURVEYS.

Geological surveys have been organized in nearly all the states of the Union, and in some of the older states they have been continuously active for over fifty years. In most states they are regular departments of the state government, and receive definite financial support in the way given to every other bureau or department. They are usually in charge of a board of three or five men, who direct the work of the survey, and who are responsible for its management.

The general purpose of a geological survey is to disclose and make known the mineral resources of a state. Under such heading would naturally come the metalliferous deposits, coal fields, iron ores, building stones, soils, clay beds, road materials, water power, and kindred subjects. The field work of a survey consists in mapping accurately the locations of all such valuable products as those just mentioned, and determining the areal extent and quantity of each. The office work consists of careful

tests and analyses of all samples collected in the field, and the preparation of reports which describe fully the mineral resources under investigation. The reports and maps when published are valuable alike to the citizens of the state and to outside capitalists and investors. Surveys examine and test those minerals, ores and rocks that are but little known and determine whether or not they are of economic value. They also suggest ways of preventing waste in mining operations, and assist in all ways to conserve the natural resources. Surveys are potent factors in making available valuable information regarding the mineral resources of the state, which knowledge may be utilized by the poorest citizen as well as the wealthiest corporation.

PRINCIPAL FEATURES OF STATE LAWS PROVIDING FOR SURVEYS.

The law establishing a state geological survey was passed by the legislature at the session of 1901. As set forth in the various sections of the law, the principal objects of the measure are as follows: An examination of the economic products of the state, such as gold, silver, copper, lead, and iron ores, as well as building stones, clays, coal, and all mineral substances of value; an examination of the soils, road-building material, water supplies, artesian wells, water power, etc.; an examination of the physical features of the state with reference to their practical bearing upon the occupations of the people; the preparation of special geographic and economic maps to illustrate the resources of the state; and the publication from time to time of the results of the work of the survey in reports and bulletins, and the dissemination of these among the people.

At the session of 1903 the legislature amended the above law, by providing for cooperative work between the federal and the state bureaus engaged in geological survey work. The amendment authorized the state board of geological survey to make provisions for topographic, geologic, and hydrometric surveys of the state, in cooperation with the United States geological survey, in such manner as would be of the greatest benefit to the agricultural, industrial and geological requirements of the

state. The amendment carried a proviso that the director of the United States Geological Survey should agree to expend on the part of the United States upon such surveys a sum equal to that expended by the state.

At the session of the legislature for 1909 the work of the state geological survey was provided for by a law having these provisions:

SECTION 1. In order to complete the topographical map of the State of Washington, and for the purpose of making more extensive stream measurements, and otherwise investigating and determining the water supply of the state, there is hereby appropriated the sum of thirty thousand dollars (\$30,000), for cooperation with those branches of the United States Geological Survey engaged in this work. This appropriation, however, shall be contingent upon, and not become available unless the United States government apportion an equal amount to be expended for similar purposes within the state. The board of geological survey is hereby authorized and directed to enter into such agreements with the director of the United States Geological Survey as will insure that the said surveys and investigations be carried on in the most economical manner, and that the maps and data be available for the use of the public as quickly as possible.

SEC. 2. In order to enable the board of geological survey to carry on investigations authorized by law, there is hereby appropriated the sum of twenty thousand dollars (\$20,000) for the use of said board in the geological and other investigations provided for in chapter 165 of the Session Laws of the State of Washington for 1901, and as amended in chapter 157 of the Session Laws of 1903.

SEC. 3. In order to carry out the purposes of this act, all persons employed hereunder are authorized to enter and cross all lands within the state: *Provided*, That in so doing no damage is done to private property.

SEC. 4. The sum of fifty thousand dollars (\$50,000) herein appropriated for the purposes specified in this act shall be available in the following manner: One-half during the first twelve months after this act takes effect, and the unexpended balance during the second twelve months after this act takes effect.

REPORT FOR 1915-17.**ORGANIZATION.**

The State Board of Geological Survey consists of the following members: Governor Ernest Lister, President; Lieutenant Governor Louis F. Hart; State Treasurer Edward Meath, Secretary; President Henry Suzzallo, of the State University; and President Ernest O. Holland, of the State College. The State Geologist is Professor Henry Landes, who has his office at University Station, Seattle. In cooperation with the United States Geological Survey the Director of that organization is represented by Thomas G. Gerdine, Geographer in Charge, Northwestern Division; and Glen L. Parker, 406 Federal Building, Tacoma, District Engineer.

TOPOGRAPHIC SURVEYS.

The accompanying progress map indicates the location of the quadrangles surveyed during this biennium, as well as from 1909 to 1915. In selecting quadrangles for survey it has been the policy of the board to choose those areas where the demand for the maps is very great and where they are most likely to be used to advantage.

Since the last biennial report was made the following topographic sheets have been engraved and are now ready for use: Arlington, Chehalis, Coyote Rapids (formerly called the Haven sheet), Hoquiam, Ocosta, and Wenatchee. The following topographic sheets are in the engravers' hands and will soon be ready for distribution: Malaga, Pasco, and Priest Rapids (formerly called the Mitchell sheet).

During the field season of 1915 the topographic mapping was done on the Prosser and Wallula quadrangles. Upon these maps the office work has been completed and they are now ready for the engraver. The field season of 1916 was spent on the Walla Walla and Connell quadrangles, and these areas were completed. The four quadrangles just mentioned were chosen for topographic mapping in order to render assistance to irrigation projects which will be necessary in order to utilize large portions of the arid region. The Connell quadrangle was sur-

veyed in order to render assistance to the dry farming experiment station of the State College which has recently been established at Lind.

Copies of all engraved topographic maps may be purchased of the United States Geological Survey, Washington, D. C., at ten cents each, or at six cents each in lots of one hundred or more.

HYDROMETRIC SURVEYS.

The water resources of the state have been investigated jointly by the federal and state surveys, each party contributing equal sums. The work is directed from a district office of the federal Survey, located in the Federal Building at Tacoma. In addition the federal Survey maintains gaging stations on Indian reserves, the cost of which is borne by the United States Office of Indian Affairs. It also cooperates with the United States Reclamation Service, and the United States Forest Service in collecting and publishing stream flow data. The funds for carrying on stream gaging work are not sufficient to meet the demand for such work, so that power companies, irrigation districts, cities, and individuals have contributed services of employees, instruments, material, equipment, and other help. The cost of hydrometric work carried on in the state during the present biennium is shown in the following table, the value of all services and other assistance rendered by co-operating parties being estimated when not known definitely:

ESTIMATED COST OF WATER RESOURCES INVESTIGATIONS IN THE STATE FOR THE BIENNIUM ENDING MARCH 31, 1917.

Washington Geological Survey.....	\$12,000
United States Geological Survey, gaging streams and power reports	\$12,000
United States Geological Survey, publishing water supply papers	13,730
United States Geological Survey, ground water investigations in Quincy Valley.....	1,650
United States Reclamation Service (approximate) ..	7,000
United States Office of Indian Affairs.....	6,700
United States Forest Service.....	1,060
District office rent furnished free of charge in the Federal Building at Tacoma.....	1,440
Total Federal	43,580
Power companies, irrigation districts, cities and individuals	7,600
Grand Total	\$51,180

Cooperation between the British Columbia Hydrometric Survey and the United States Geological Survey was instituted during the biennium. It consists of a plan to maintain jointly gaging stations on all important streams at or near the international boundary between Washington and British Columbia.

At present two such stations are being maintained; one on Clark Fork at Metaline Falls, Washington, and one on Columbia River at Trail, British Columbia. It is hoped that the work can be extended to cover Kettle, Okanogan, Similkameen, and Skagit rivers.

The chief objects of hydrometric surveys are to obtain accurate information regarding the amount of water that could be depended upon for irrigation and for power purposes. All of the water that can be secured by storage that is tributary to arid Washington will soon be needed for irrigation. The rapid industrial development of Western Washington demands the continued utilization of the available water power. The detailed investigations have been along two lines, viz.: establishment and maintenance of gaging stations, and a series of reports summarizing the power possibilities of the Cascade Range.

Gaging Stations.—As shown on the progress map, gaging stations have been maintained upon all of the principal streams of the state. Measurements of flow are frequently made, and daily records indicating height of water on substantially set gages are kept by local observers or by means of several types of water stage registers, which record the height of water on record sheets by clock driven mechanism. The measurements and gage heights make possible an estimate of the average amount of water flowing each day during the year. The water contributed by any stream varies considerably from day to day, season to season, and year to year, so that records for a series of years are necessary for properly designing hydraulic works. The records are particularly important during low water periods which occur on some streams in the early fall and on others in mid-winter. There are 90 gaging stations in operation at the close of the biennium, 34 of which are equipped with automatic water stage recording instruments.

The measurements, computed daily discharge, and summary of results are published annually by the United States Geological Survey in water supply papers. A sample of the data published for each station is given below for Skagit River at Sedro Woolley during the year ending September 30, 1916:

SKAGIT RIVER NEAR SEDRO WOOLLEY, WASH.

Location.—In NW $\frac{1}{4}$, Sec. 36, T. 35 N., R. 4 E., at Northern Pacific Railway bridge, three-fourths mile below intake of Beatty's slough, 1 $\frac{1}{2}$ miles south of Sedro Woolley in Skagit County, 21 miles above mouth, and 32 miles below Baker River. Elevation at low water, about 25 feet.

Drainage Area.—2,930 square miles; measured on General Land Office map.

Records Available.—May 1, 1908, to September 30, 1916.

Gage.—Vertical staff on cribbing 100 feet above draw-span pier of Northern Pacific Railway bridge. Datum, extreme low water in Puget Sound. Temporary gage used when stage was below 37 feet; installed September 25, 1915, on downstream side of group of piles, 50 feet above third concrete pier (from left bank) of railway bridge. Gage read by E. J. Woods.

Discharge Measurements.—Made from highway bridge one-third mile above gage, Beatty's slough measured from highway bridge.

Channel and Control.—Gravel; shifts at high stages. Banks do not overflow except during extreme floods.

Extremes of Discharge.—Maximum stage recorded during the year, 46.5 feet at 3 p. m. June 18 (discharge, 63,800 second-feet); minimum stage recorded, 32.3 feet at 7 a. m. October 10-11 (discharge, 2,740 second-feet).

1908-1916: Maximum stage recorded, 56.1 feet November 30, 1909 (discharge, 96,100 second-feet); minimum stage recorded, 32.3 feet September 29-30 and October 10-11, 1915 (discharge, 2,740 second-feet).

Ice.—Stage-discharge relation seldom affected by ice.

Diversion.—Beatty's slough carries from 1.5 per cent. of total flow at low stages to 8 per cent at high stages. Amount determined each visit and added to flow measured in river proper.

Regulation.—None.

Accuracy.—Stage-discharge relation changed during high water in June. Rating curve used before June 18 well defined between 3,500 and 18,000 second-feet, fairly well defined above and below; curve used after June 18 fairly well defined above 6,000 second-feet and poorly defined below. Gage read to half tenths daily; in addition crest gage heights observed or estimated. Practically no diurnal fluctuation. Results good except for a short interval in January and in February when they are only fair, due to ice.

**DISCHARGE MEASUREMENTS OF SKAGIT RIVER NEAR SEDRO WOOLLEY,
WASH., DURING THE YEAR ENDING SEPTEMBER 30, 1916.**

Date	Made By—	GAGE HEIGHT (a)		Dis- charge
		Old Gage	Temporary Gage	
		Feet	Feet	Sec.-Ft.
Dec. 12	J. T. Hartson.....	36.40	36.35	15,000
Dec. 13	J. T. Hartson.....	35.85	35.80	12,800
June 22	O. O. Brown.....	40.00	(b)	21,800
June 28	O. O. Brown.....	42.05	(b)	45,000
Sept. 27	J. E. Stewart.....	34.97	35.49	10,000

(a) Observer's readings below 37 feet were taken from temporary gage; above 37 feet from old gage.

(b) Temporary gage submerged.

**DAILY DISCHARGE, IN SECOND-FEET, OF SKAGIT RIVER NEAR SEDRO
WOOLLEY, WASH., FOR THE YEAR ENDING SEPTEMBER 30, 1916.**

NOTE.—Stage-discharge relation seriously affected by ice gorge one-half mile below gage Jan. 17-21, discharge interpolated. Gage heights doubtful on account of ice at gage Feb. 2-7, discharge interpolated.

**MONTHLY DISCHARGE OF SKAGIT RIVER NEAR SEDRO WOOLLEY, WASH.,
FOR THE YEAR ENDING SEPTEMBER 30, 1916.**
(Drainage area, 2,980 square miles.)

MONTH	DISCHARGE IN SECOND-FEET				RUN-OFF	
	Maxi- mum	Mini- mum	Mean	Per Square Mile	Depth in Inches on Drainage Area	Total in Acre-Feet
October	83,800	2,740	9,680	3.30	3.80	505,000
November	81,900	6,030	11,700	3.99	4.45	698,000
December	46,700	7,220	13,700	4.68	5.40	842,000
January	18,200	3,190	5,860	1.83	2.11	380,000
February	48,800	4,660	16,000	5.46	5.89	920,000
March	88,200	9,150	18,200	6.21	7.16	1,120,000
April	24,800	12,500	16,100	5.49	6.12	958,000
May	83,800	15,300	22,700	7.75	8.94	1,400,000
June	68,800	20,000	36,900	12.6	14.06	2,200,000
July	44,000	22,000	32,600	11.1	12.80	2,000,000
August	25,800	11,000	17,700	6.04	6.96	1,000,000
September	15,900	6,020	9,120	3.11	3.47	543,000
The year.....	68,300	2,740	17,400	5.94	31.16	12,700,000

Cascade Power Reports.—Through cooperative arrangements with the State Board of Geological Survey in 1909, the federal Survey adopted its first comprehensive plan for giving the public accurate data concerning water power resources. More recently similar work has been instituted in Oregon. Progress has been hampered considerably due to lack of sufficient base data and the need of continuing stream flow observations over a series of years in order to insure dependable estimates of water supply. Surveys have been run along the portions of the larger streams in the Cascade Range. Reservoir sites which appear to offer favorable storage opportunities for increasing the low water flow have been surveyed and a large mass of information bearing upon the feasibility of hydro-electric projects has been collected.

The scheme followed in analyzing the power resources of the Cascades consists of assembling the estimates for a group of streams within a relatively small section of the range. It is proposed to publish the estimates in a series of seven reports published by the United States Geological Survey as water supply papers. The areas to be covered in the seven units are shown on the progress map attached.

The first report is Water Supply Paper 253 and is entitled "Water Powers of the Cascade Range, Part I, Southern Washington." The power possibilities of Klickitat, White Salmon, Little White Salmon, Lewis and Toutle rivers are summarized.

The second report is Water Supply Paper 313 and is entitled "Water Powers of the Cascade Range, Part II." The power possibilities of Cowlitz, Nisqually, Puyallup, White, Cedar and Green rivers are summarized. This report also includes a discussion of the hydroelectric market conditions in the Puget Sound region.

The third report is Water Supply Paper 369 and is entitled "Water Powers of the Cascade Range, Part III, Yakima Basin." The summaries were more difficult to compile than for any of the series on account of the necessity of taking into consideration the ultimate use of stored water for irrigation in the Yakima Valley.

The fourth report has not as yet been published, but will be entitled "Water Powers of the Cascade Range, Part IV, Wenatchee and Entiat basins." The relative water power resources in the Wenatchee basin with and without the proposed Quincy Valley irrigation scheme in operation will be summarized and the flow available for the Quincy project through utilizing storage in Wenatchee Lake reservoir will be described.

All of the field data have been collected for the fifth unit and considerable work has been done toward compiling the data.

Practically all of the surveys have been completed for the sixth and seventh units, and most of the field reconnaissance for the sixth unit has been finished. Gaging stations are being maintained in each to determine the available water supply.

GEOLOGICAL SURVEYS.

Mineral Resources.—The State Geological Survey, since 1911, has cooperated with the United States Geological Survey in the collection of statistics regarding the mineral production of Washington. It is a matter of great importance to the state that such statistics be secured covering accurately the entire mineral output, because of the bearing this must have upon

the establishment of industrial enterprises. The accompanying table gives a summary of the principal mineral products of Washington for the ten-year period from 1906 to 1915, inclusive. While the production is already large, and constantly growing, it is capable of a very much greater extension when the economic minerals are investigated and made better known.

The statistics covering the mineral resources of the state should be published annually. The report for 1912, known as "Bulletin 11," gives a description of the principal localities where different mineral products are obtained, with a list of producers and a statement covering the output. This bulletin was accompanied by an outline map of the state wherein, by a system of symbols and colors, all varieties of mineral products were shown in the localities where they are obtained.

MINERAL PRODUCTION OF WASHINGTON FROM 1906 TO 1915, INCLUSIVE (a).

	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915
NON-METALLIC PRODUCTS										
Coal	\$5,908,434	\$7,079,801	\$6,000,412	\$9,158,000	\$9,764,465	\$8,174,170	\$8,042,871	\$9,245,187	\$8,751,511	\$5,278,299
Clay products	1,400,884	1,021,964	2,104,280	3,060,460	3,023,354	2,861,738	2,888,870	2,870,296	1,809,491	1,400,061
Portland cement .....	.....	(b) 214,500	(b) 306,000	767,135	1,081,704	1,496,807	2,012,785	2,833,260	1,870,078	1,790,489
Granite	480,975	562,852	570,944	742,578	642,922	1,845,551	809,201	140,279	72,079	250,638
Basalt .....	.....	.....	.....	.....	.....	.....	.....	(c) 682,915	1,068,042	1,452,869
Sandstone	169,500	295,585	464,587	385,470	438,551	801,848	344,476	560,469	450,435	33,710
Limestone	49,192	68,317	31,690	36,289	39,136	32,478	30,370	62,213	10,565	11,560
Marble	59,935	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lime	347,924	239,569	228,358	282,028	297,785	228,983	234,832	219,163	178,945	189,200
Mineral waters	10,800	10,820	13,000	15,959	12,671	14,664	17,642	18,884	26,777	11,708
Sand and gravel	144,725	179,800	261,581	428,625	451,569	819,760	345,289	365,886	324,628	211,480
Diatomaceous earth .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14,515
Totals.....	\$8,050,419	\$11,165,677	\$11,001,420	\$14,825,308	\$15,099,667	\$14,775,954	\$14,216,236	\$16,507,051	\$12,564,572	\$10,712,624
METALLIC PRODUCTS										
Gold	\$221,648	\$362,300	\$259,700	\$362,051	\$738,145	\$947,677	\$930,904	\$935,275	\$957,173	\$591,419
Silver	30,738	55,400	45,400	41,534	110,886	129,204	254,826	200,068	146,468	129,709
Copper	45,360	24,459	21,411	38,167	11,086	39,776	179,192	147,888	108,671	178,652
Lead	82,787	29,786	32,844	12,414	58,180	38,186	5,732	8,909	2,555	12,875
Totals.....	\$350,533	\$571,949	\$354,355	\$448,366	\$908,249	\$1,055,017	\$1,120,214	\$1,088,135	\$832,767	\$713,635
Grand Total.....	\$8,000,952	\$11,597,616	\$11,415,781	\$15,274,274	\$16,007,906	\$15,081,971	\$16,336,450	\$17,595,216	\$13,374,339	\$11,426,259

(a) Compiled from Mineral Resources U. S. Geological Survey.

(b)

(c)

Totals.

Office Work.—The office work of the Geological Survey becomes increasingly heavy from year to year. Constant inquiries come to the office in regard to the mineral resources of every portion of the state. Prospective settlers and others are very desirous of accurate information regarding the climatic and soil conditions of those regions in which they may plan to make their homes. Manufacturers are desirous before coming to Washington of knowing the nature of the fuel supply and the variety of crude materials of a mineral character which may be obtained for manufacturing purposes. On the whole the work of the State Geological Survey is carried on at a minimum of expense because a very large part of the work, especially the office work, is done by men who do not receive any compensation for that purpose out of the funds of the Survey.

Within the biennium a report on The Coal Fields of Kittitas County, known as Bulletin 9, has been printed. This is the third of the county reports on our coal fields, bulletins on King and Pierce counties having been issued in previous years. There has lately been printed, also, a report on The Tertiary Formations of Western Washington, known as Bulletin 13. This publication describes the bed rock formations of that part of the state to the westward of the foothills of the Cascade Mountains. The report is accompanied by geologic maps which represent not only the areal extent of the various kinds of rocks, but also the structure of the formations, the dip and strike of the beds, and in a general way indicate the best places for prospecting for gas and oil. The possible occurrence of these economic products at the different localities of the extensive area are carefully considered.

FINANCIAL STATEMENT.

TOPOGRAPHIC AND HYDROGRAPHIC SURVEYS.

U. S. Geological Survey:

Allotment for cooperation 1915-17.....	\$35,000 00
Expenditures to December 1, 1916.....	30,488 06

Balance on December 1, 1916.....	\$4,511 94
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State Geological Survey:

Appropriation for 1915-17.....	\$35,000 00
Expenditures to December 1, 1916.....	30,111 43

Balance on December 1, 1916.....	\$4,888 57
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RECOMMENDATIONS.**APPROPRIATIONS REQUESTED.**

For topographic and hydrometric surveys (conditioned upon a similar sum being expended in the state by the United States Geological Survey).....	\$35,000
For Geological Surveys.....	20,000

TOPOGRAPHIC SURVEYS.

For some time the greatest demand for topographic surveys has come from the arid and semi-arid regions of the state where the land may be put to its greatest use only by irrigation, and where topographic maps are invaluable for engineering work of this character. Such maps are also requested in those portions of Washington where the country is being rapidly settled, and in certain mountainous areas where large water-power projects are under consideration. Urgent requests are now on file for topographic surveys of Asotin, Eatonville, Fort Simcoe, Othello, Olympia, Pomeroy, Port Angeles, Sultan and Yakima quadrangles.

In the past eight years level lines or profiles have been run along all the streams of the Cascade Mountains, except the three forks of the Nooksack River. This has been done as a necessary part of the problem of determining with accuracy the total hydro-electric power of the rivers of the Cascades. In the next biennium the Nooksack River should be surveyed, and river profiles begun on the streams of the Olympic Mountains. When the latter are completed it will then be possible to publish detailed reports on the water power resources of the entire state.

HYDROMETRIC SURVEYS.

As indicated on the progress map accompanying this report, gaging stations are maintained on a large number of the rivers where information is very necessary as to the total amount of water available for municipal supplies, irrigation and power. The number of stations should be increased rather than diminished. Each added year of gaging at any station makes the records that much more valuable. The demand for accurate information regarding our water resources grows stronger with

each biennium. It is recommended that the usual appropriation for this work be made so that cooperation with the Federal Government may be continued.

GEOLOGICAL SURVEYS.

The sum of twenty thousand dollars, the same amount as appropriated by the legislatures of 1909, 1911 and 1913, is requested for geological surveys, in order that certain lines of work now under way may be completed and some important new work may be begun.

Uncompleted Reports.—In former years a large amount of field and office work has been done upon certain reports which have not yet been published, because the money has not been available. It is urgent that funds be provided so that such bulletins may be printed at once and their contents made available for use. The field work has been completed, and the manuscript partly prepared, for a report upon the coal deposits of Whatcom and Skagit counties. The field work has been about two-thirds completed for a report upon the coal fields of Thurston, Lewis and Cowlitz counties. When these reports are through the press the State Geological Survey will have issued detailed bulletins covering all of the coal resources of the state.

Some time ago a bulletin was published on the surface geology of the Puget Sound basin. Since that time the field work has been completed and the manuscript prepared for a similar report upon the surface geology of that portion of the state south of the latitude of Tenino, and west of the foothills of the Cascades. This report can be sent to the printer as soon as an appropriation is available.

Soil Surveys.—In earlier years soil surveys have been made of nearly all the logged-off lands of Western Washington, besides similar surveys and reports upon the Quincy Valley country, Stevens and Franklin counties, in Eastern Washington. In all soil surveys cooperation has been afforded by the United States Bureau of Soils, the Federal Bureau usually assuming about three-fourths of the expense of the field work besides all

the cost of printing. The reports of the soil surveys have been in large demand from the agriculturists, commercial bodies, prospective settlers, county assessors, and all others who desire to know the facts about the soil conditions in various parts of the state. At the present time requests are on file for soil surveys in various sections of Washington where this work has not been done.

Road Materials.—In the large road construction program now being carried out by the state and the various counties, it is a matter of the greatest concern that the very best quality of materials be used. In most states it is the business of the Geological Survey to locate, map, and describe all the materials suitable for road building. Repeated requests have come from county commissioners, county engineers, and road contractors that such a detailed survey be made in Washington.

It is therefore recommended that provision be made for a complete field investigation of the deposits of sand and gravel suitable for road surfacing and for concrete construction as well; and that the field studies should include a search for all available occurrence of limestone and clay, of value in cement making, which have not been described in earlier survey reports. It is proposed that extensive lots of samples be collected in the field, and that these be carefully tested in the most practical way, so that the relative values of all samples secured can be accurately determined. It would be the plan to publish full reports and maps covering all the results of the field investigations and the practical tests that were made, and place these in the hands of all engineers and others who are charged with the responsibility of maintaining the highest possible standards in road construction.

Surveys of Metal Mining Districts.—In addition to the detailed surveys already made of the best known districts, there are many requests for reconnaissance surveys of the scattered mining sections, whereby the varieties of bed-rock, the important minerals, and the character of the ore deposits may be determined and described. For the next biennium surveys of the mining districts in Ferry, Stevens and Pend Oreille counties should

be made. Such surveys are of very great service to the mining men who are giving their time and money to the development of one of the state's resources. It is of great value to the miner, as well as to the investor, and to the state at large, that the truth in regard to the quality and quantity of the ore bodies should be made known.

Report on Mineral Industries.—Any information bearing upon the production of different minerals in different counties and other portions of the state is always in much demand. It seems necessary to keep this information in such form that it may be given out regularly and be revised as often as desirable. At least once a year reports and maps should be issued which set forth the localities where different mineral products may be obtained, along with the names of all producers, and with accurate statistics in regard to the output of each particular mineral concerned. Such information is very greatly desired by manufacturers and others who have occasion to use in any way whatsoever those minerals that are of economic importance.

Topographical Map.—There is constant inquiry for a map which will show by a system of contours, or by a series of lines, the elevations of various portions of the state. By utilizing the base map which has already been prepared, and by compiling the data regarding elevations throughout the state, it will be possible to prepare a map which will give the information most needed. Such a map should be printed in colors, the black referring to culture, the blue giving the water bodies, and a series of brown shades or tints which will give the variation in elevation from sea level to the tops of the highest mountains.

Geological Map.—More requests have come for a geological map of the state than for any other one thing. With the base map now available it is desirable that the boundaries of the different geological formations should be entered thereon and a complete geological map of the state be prepared as early as possible. This has been very generally done by other states and Washington will be one of the last to prepare such a map. The cost of preparation of such a map is not excessive, and its value to our citizens generally would repay the cost many fold.

PUBLICATIONS
OF THE
WASHINGTON GEOLOGICAL SURVEY

ADDRESS
STATE LIBRARIAN
OLYMPIA, WASHINGTON

Volume 1.—Annual Report for 1901. Part 1, Creation of the State Geological Survey, and An Outline of the Geology of Washington, by Henry Landes; part 2, The Metalliferous Resources of Washington, Except Iron, by Henry Landes, William S. Thyng, D. A. Lyon and Milnor Roberts; part 3, The Non-Metalliferous Resources of Washington, Except Coal, by Henry Landes; part 4, The Iron Ores of Washington, by S. Shedd, and the Coal Deposits of Washington, by Henry Landes; part 5, The Water Resources of Washington, by H. G. Byers, C. A. Ruddy and R. E. Heine; part 6, Bibliography of the Literature Referring to the Geology of Washington, by Ralph Arnold. Out of print.

Volume 2.—Annual Report for 1902. Part 1, The Building and Ornamental Stones of Washington, by S. Shedd; part 2, The Coal Deposits of Washington, by Henry Landes and C. A. Ruddy. Postage 20 cents.

Bulletin 1.—Geology and Ore Deposits of Republic Mining District, by Joseph B. Umpleby. Bound in cloth; price 35 cents.

Bulletin 2.—The Road Materials of Washington, by Henry Landes. Bound in cloth; price, 60 cents.

Bulletin 3.—The Coal Fields of King County, by Geo. W. Evans. Bound in cloth; price, 75 cents.

Bulletin 4.—The Cement Materials of Washington, by S. Shedd. Bound in cloth; price, 75 cents. Paper cover; price, 40 cents.

Bulletin 5.—Geology and Ore Deposits of the Myers Creek and Oroville-Nighthawk Districts, by Joseph B. Umpleby. Bound in cloth; price, 50 cents.

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OPERATION WITH THE WASHINGTON
GEOLOGICAL SURVEY.**

(For copies of these publications address the Director, U. S. Geological Survey, Washington, D. C. Water-Supply papers may also be obtained, upon request, and free of charge, from the U. S. Geological Survey district office, 406 Federal Building, Tacoma, Washington.)

TOPOGRAPHIC MAPS OF THE FOLLOWING QUADRANGLES.

Arlington, Beverly, Cedar Lake, Chehalis, Coyote Rapids, Hoquiam, Malaga, Moses Lake, Mount Vernon, Ocosta, Pasco, Priest Rapids, Prosser, Quincy, Red Rock, Wallula, Wenatchee, Winchester.

Power Reports.

Water-Supply Paper No. 253: Water Powers of the Cascade Range, Part I, Southern Washington.

Water-Supply Paper No. 313: Water Powers of the Cascade Range, Part II, Southeastern Washington, Puget Sound Region.

Water-Supply Paper No. 369: Water Powers of the Cascade Range, Part III, Yakima Basin.

Water-Supply Paper No. —: Water Powers of the Cascade Range, Part IV, Wenatchee and Entiat basins. In preparation.

River Profiles.

Water-Supply Paper No. 346: Profile Surveys of Clark Fork of Columbia River.

Water-Supply Paper No. 366: Profile Surveys of Snoqualmie, Sultan and Skykomish rivers.

Water-Supply Paper No. 368: Profile Surveys of Wenatchee River and tributaries.

Water-Supply Paper No. 376: Profile Surveys, Chelan and Methow basins.

Water-Supply Paper No. 377: Profile Surveys, Spokane and John Day basins.

Water-Supply Paper No. 419: Profile Surveys in Skagit River Basin.

Annual Stream-Flow Reports.

Water-Supply Paper No. 272: Surface Water Supply of the United States, North Pacific Coast, 1909.

Water-Supply Paper No. 292: Surface Water Supply of the United States, North Pacific Coast, 1910.

Water-Supply Paper No. 312: Surface Water Supply of the United States, North Pacific Coast, 1911.

Water-Supply Paper No. 332: Surface Water Supply of the United States, North Pacific Coast, 1912.

Water-Supply Paper No. 340. Gaging stations and publications on water resources 1885-1913.

Water-Supply Paper No. 362: Surface Water Supply of the United States, North Pacific Coast, 1913.

Water-Supply Paper No. 392: Surface Water Supply of the United States, North Pacific Coast, 1914.

Water-Supply Paper No. 412: Surface Water Supply of the United States, North Pacific Coast, 1915. In preparation.

Water-Supply Paper No. 442: Surface Water Supply of the United States, North Pacific Coast, 1916. In preparation.

Qualitative Report.

(Principally in cooperation with State Board of Health.)

Water-Supply Paper No. 339: Quality of Surface Waters of Washington.

**PUBLICATIONS OF THE U. S. DEPARTMENT OF AGRICULTURE,
BUREAU OF SOILS, IN COOPERATION WITH THE
WASHINGTON GEOLOGICAL SURVEY.**

(For copies of these publications address one of the members of congress from Washington.)

Reconnaissance Soil Survey of the Eastern Part of Puget Sound Basin.

Reconnaissance Soil Survey of the Western and Southern Parts of the Puget Sound Basin.

Reconnaissance Soil Survey of Southwestern Washington.

Reconnaissance Soil Survey of the Quincy Area.

Reconnaissance Soil Survey of Stevens County.

Reconnaissance Soil Survey of Franklin County. In press.

STATE OF WASHINGTON

ELEVENTH BIENNIAL REPORT

OF THE

State Board of Health

FOR THE

Years Ending September 30, 1915, and
September 30, 1916

OLYMPIA, WASH.

FRANK M. LAMBORN  PUBLIC PRINTER
1916

**STATE OF WASHINGTON,
OFFICE OF THE STATE COMMISSIONER OF HEALTH.**

SEATTLE, WASH., October 1, 1916.

To Hon. Ernest Lister, Governor of Washington:

SIR: In compliance with Section 2 of an act to create and establish a Board of Health and Bureau of Vital Statistics in the State of Washington, I have the honor to present to you the accompanying report for the biennial period ending September 30th, 1916.

Respectfully,

THOMAS D. TUTTLE,
State Commissioner of Health.

MEETINGS OF THE BOARD.

During the biennium the State Board of Health has held four meetings.

The first meeting was held at Olympia, January 29th, 1915. At this meeting Dr. Eugene R. Kelley, who so faithfully, thoroughly and energetically performed the duties of State Commissioner of Health from October 1st, 1911, to February 28th, 1915, submitted his resignation as State Commissioner of Health, he having been tendered a more lucrative position in public health work in Massachusetts—a position tendered him in the nature of a compliment to his efficiency as a health officer. Dr. Kelley submitted his resignation to take effect the 28th of February, 1915. His resignation was accepted with sincere regret on the part of each member of the State Board of Health.

The calling of Dr. Kelley from the State of Washington to Massachusetts, brings to our attention the fact that competent, efficient health officers are not very abundant—a fact that was further brought to our attention in June of 1916, when Dr. Thomas Tetreau, health officer of Yakima county and of the city of North Yakima, was called to take a position as health officer in the city of Portland, Maine. It would appear, therefore, that the State of Washington has been successful in training health officers but possibly on account of lack of sufficient appropriation to carry on the work, it has not been so successful in retaining them.

At this meeting the office of Commissioner of Health of the State of Washington was tendered to and accepted by Dr. Thomas D. Tuttle, of Helena, Montana.

At this time Dr. Fred R. Hedges of Everett, was elected president of the Board.

The next meeting of the State Board of Health was held in North Yakima, September 22d, 1915. At this meeting the general work of the Board was discussed but there were no changes in the rules and regulations of the State Board of Health.

The next meeting of the Board was held in Olympia, January 20th, 1916. This being the annual meeting, Dr. Elmer E. Heg was elected president for the ensuing year.

The Board endorsed a bill before Congress providing for a National Leprosarium, and also a bill providing for Federal aid in the care of non-resident tubercular subjects.

An urgent call from the States of California, Utah and Oregon, asking for a meeting of representatives of the Western States with the U. S. Public Health Service to be held at Salt Lake City, to consider ways and means to prevent the spread of rabies in these states, was presented and the secretary was instructed to attend such meeting.

The next meeting was held on July 10th, at Seattle. At this meeting the question of control of infantile paralysis was discussed and the regulations relative to this disease were changed to read as follows:

12. Infantile paralysis or Anterior Poliomyelitis.

(a) All cases of anterior poliomyelitis or infantile paralysis shall be handled according to the rules governing cases subject to quarantine.

(b) The patient shall be subject to quarantine for not less than eight (8) weeks from the beginning of the illness.

(c) All persons exposed shall be subject to quarantine for at least ten (10) days from date of last exposure.

(d) When in the opinion of the health officer it may be advisable, he may order any case of anterior poliomyelitis or infantile paralysis removed to an isolation hospital.

The commissioner was authorized to attend a meeting of health officers from Washington, Oregon, California, Idaho, Montana and British Columbia, to be held at Portland, Oregon, on July 15th, to provide uniform regulations for the prevention of the introduction of this disease by travelers from Eastern states.

The question of measures to be introduced at the coming session of the legislature was discussed and it was agreed that a bill providing for the whole-time health officers be introduced, and also that a bill providing for the protection of the streams of the state, known as the "water and sewerage" bill, which was introduced at the last legislature, be again introduced at the coming legislature in the same form as introduced two years ago.

COMMISSIONER'S REPORT.

During the year ending September 30th, 1916, there have been no serious outbreaks of disease in this state. The work of the health department has been devoted to the prevention of such outbreaks and to the reduction in the number of cases of communicable diseases that occur more or less frequently but not in epidemic form.

The nearest approach to an epidemic that we have had, and which was really an epidemic, was an outbreak of measles in the cities of Spokane and Seattle in the early months of 1916. During the first six months of 1916, there were 10,000 cases of measles reported in the state; of these, over 8,000 were reported from the cities of Seattle and Spokane. With this large number of cases reported from these two cities, there were only 17 deaths—8 in Seattle and 9 in Spokane. This would indicate that the cases were pretty thoroughly reported, and the effect of such thorough reporting of this disease is illustrated by the fact that it did not spread to any great extent beyond these cities. Had the cases not been reported, the disease would undoubtedly have spread to an alarming extent over the entire state.

The work of the state health department during the biennium has consisted in a constant effort to hunt down and remedy insanitary conditions in the state, and to educate the people relative to the prevention of disease. The effect of this work is illustrated by the fact that in 1913 there were 708 deaths from the principal preventable diseases; namely, scarlet fever, diphtheria, typhoid fever, measles, whooping cough, and diarrhea or enteritis in children under two years of age, as against 386 deaths from these same diseases in 1915, or, a saving of 322 lives in a single year. And this does not represent the entire saving, as there has, undoubtedly, been an increase in the population between 1913 and 1915, and with such increase in population we would naturally expect a proportionate increase in the number of deaths.

The saving of lives is not the only matter to be taken into consideration. Without regard to the value of a human life, there is an actual monetary side to be taken into consideration. We do not know what the average cost of the various diseases may be, but we do know what the actual cost of typhoid fever is. We know that every case of typhoid fever in an adult costs somebody, either the individual or the county, not less than \$300.00 in loss of time, doctor's hire, nurse's hire, hospital fees, etc. In 1913 there were 138 deaths reported from typhoid fever in this state. We know that all cases were not reported, but we can accurately estimate the number of cases that existed. For instance, two epidemics of typhoid fever have been carefully studied in the State of Washington, and it was found that in these epidemics, where every case was traced down, that the typhoid fever death rate amounted to about 8 per cent. of all cases. However, if we take the general average for deaths from typhoid fever throughout the United States, namely 10 per cent, our deaths in 1913 would indicate that there were 1,380 cases of typhoid fever in the state during that year, which at a cost of \$300.00 per case, would mean that the people actually expended \$414,000.00. In 1915 there were 121 deaths from typhoid fever, which would indicate that we had during 1915, 1,210 cases, which at \$300.00 per case would mean that the people of this state, individually or collectively, expended \$363,000. The saving in this disease alone for 1915 was \$51,000.00. Typhoid fever can be absolutely prevented, but it takes work to accomplish this, and work means money. The question, then, comes down to a simple one of profit and loss.

In 1915, as stated, this one disease cost the people of this state \$363,000.00. The question then is, how much will it cost to prevent this loss? Is it a business proposition to fight this disease and, at the same time, fight other diseases that are preventable? Considerably less than one-half the money that is being lost annually on account of typhoid fever alone, if properly expended, would practically eradicate this disease from our state and, at the same time, eliminate epidemics of all other preventable diseases.

For more detailed report in this matter, see report on communicable diseases.

EXHIBITS.

For several years it has been customary for the State Board of Health to have a public exhibit at the Washington State Fair, held at North Yakima. Such an exhibit was installed at North Yakima in 1915, but it was the opinion of the commissioner that it being impossible to prepare a new exhibit each year, to repeat the same exhibit, or practically the same exhibit yearly, was not a good business investment. Therefore, no such exhibit was prepared for 1916. We are working on an entirely new exhibit and hope to have it ready to present at the various county fairs in 1917.

PUBLICATIONS.

The State Board of Health has for several years published a quarterly or monthly bulletin. This bulletin was intended to supply the people with information relative to means by which health might be preserved and data showing the sanitary conditions in various parts of the state.

There were 3,500 names on the mailing list for this bulletin. In April, May and June of 1915, a return card was inserted in each bulletin sent. This card notified the addressee that our mailing list was being revised and if he desired the bulletin continued to his address, it would be necessary for him to fill out and return the card. We received 350 return cards, thus indicating that out of 3,500 people receiving the bulletin, only 350 were reading it. It was therefore apparent that proper returns were not being received for the effort and money expended in this line. The bulletin was accordingly discontinued.

The commissioner then prepared a pamphlet setting forth information relative to the care of the young infant. This pamphlet is sent to every mother upon receipt of a birth certificate of the child. In this way the information goes into the hands of those who are particularly interested in this subject. We receive about 2,200 birth certificates per month at present,

thus indicating that 2,200 mothers receive this bulletin each month. From letters received by us from mothers, we believe the bulletin is proving of value to the people of the state.

In October we prepared a bulletin relative to Rural Sanitation. This bulletin has been sent to 10,000 farmers in the state. From letters received we believe this pamphlet is bringing good returns in the matter of improved sanitation on the farm.

After discontinuing the monthly bulletin published by the State Board of Health, we issued a weekly bulletin to the newspapers of the state. In this bulletin we aim to set forth in a very few words pertinent points relative to the preservation of health. These bulletins were sent to all papers in the state weekly for three months. At the end of three months we wrote to the editors of the papers asking them if they were using the bulletin and if they desired it continued to their address. One hundred and twelve papers notified us that they were publishing these weekly bulletins more or less regularly. We believe in this way a far larger number of people are reached than would be reached through the pamphlet method.

In addition to the above, frequent special bulletins have been gotten out, such as a leaflet on camp sanitation and other leaflets of interest to special industries.

DEPARTMENTAL WORK.

The work of the State Board of Health is divided into four branches or departments, namely, Epidemiological, Vital Statistics, Sanitary Inspection and Laboratory. Naturally the work of each department interlaces with that of the other departments. For instance, when the sanitary inspector goes to a locality to make an inspection of sanitary conditions he also looks into the work of the vital statistics department in each locality. When the epidemiologist goes to a district on account of communicable diseases, he looks into the question of vital statistics and the sanitary conditions in such locality.

EPIDEMIOLOGICAL DEPARTMENT.

This branch of the work has been under the direct supervision of Dr. V. J. Capron. The department is a new one provided for by the last legislature, and has, naturally, not reached the degree of efficiency that we justly anticipate. However, the foundation has been laid for a complete and efficient Epidemiological Department, and this foundation has been strengthened by a combination with the United States Public Health Service, resulting in the appointment of a collaborating epidemiologist. The title given to this official would indicate a greater degree of importance than may be attached thereto. Nevertheless, it is of great assistance to the department, showing confidence on the part of the United States Public Health Service in the conduct of the office, and, at the same time, supplying us with "franked" postal cards and stationery for securing information of interest to the Federal service, which information is of an identical character with that desired in our state department, thus saving considerable in our postal expenses.

The work of the epidemiologist is nominally that of tracing down the source of infection of communicable diseases, but practically his work involves the whole question of securing complete reports of those diseases, as no outbreak can be properly traced without complete reports of all cases. As a result of the work of this department communicable diseases are being much more thoroughly reported in the state than during previous years.

The epidemiologist also has direct supervision of the work of the laboratory, although it is not his function to perform the laboratory work.

SANITARY INSPECTION.

This department is under the direct supervision of Mr. T. R. Wilber, who has been with the Board of Health of Washington for a number of years, and his work is sufficiently well known to require little comment. Mr. Wilber has not only proven a competent sanitary inspector but he possesses the

peculiar characteristic that enables him to secure the cooperation of those with whom he comes in contact; he possesses that peculiar aptitude which almost results in a feeling of gratitude on the part of the defendant against whom he has filed a complaint and successfully prosecuted. In addition to his work as sanitary inspector, the field work in the vital statistics department—that of hunting down births and deaths that have not been reported, and keeping the local registrars posted in the work required of them and seeing that their duties are properly performed—has largely devolved upon Mr. Wilber.

VITAL STATISTICS DEPARTMENT.

The work of the vital statistics department has been under the supervision of Myrtle V. Goodman, who holds the title of deputy registrar of births and deaths. Her work has been entirely clerical in this matter and requires constant attention. To perform this work efficiently necessitates long training, a training that Miss Goodman has as a result of many years association with public health work in Washington.

LABORATORY DEPARTMENT.

Prior to 1915 the work of the laboratory was conducted on a part-time basis, Dr. E. P. Fick devoting part of his time to this work and being given an untrained assistant in the laboratory.

In May, 1915, we secured the services of Dr. Maria K. Schuhmeister, who devotes her entire time to this department, Dr. Fick being retained as consulting bacteriologist. By such an arrangement the efficiency of the laboratory has been greatly increased. However, lack of funds, has prevented our extending the scope of the work as it should be extended.

COMMUNICABLE DISEASES.

During the two years under consideration we have had no serious outbreaks of any communicable diseases, but we have had more or less of these diseases present all the time, and it is against this endemic form of disease that our fight must be concentrated in order to protect our public health.

There are seven principal diseases against which we wage constant war. Six of these are of an acute character and should be promptly eradicated. These diseases are: typhoid fever, scarlet fever, measles, whooping cough, diphtheria, and diarrhea and enteritis in children under 2 years of age.

In Table I we present a statement of the total number of deaths from these diseases, arranged according to counties and the 3 principal cities of the state. You will note that the number of deaths from these diseases, without regard to the increase in population, has been reduced from 830 in 1911 to 386 in 1915. Using the census bureau's estimate of population, they have been reduced from 69.1 per 100,000 population, to 27.6 per 100,000 population; but the question of population always being one of doubt, we prefer to note the reduction as based on the per cent. of deaths from all causes represented by the number of deaths from preventable diseases, and using this basis, we find that in 1911 preventable diseases caused 7.6 per cent. of all deaths in the state. This fatality has gradually been reduced until in 1915 these six preventable diseases caused only 3.2 per cent. of all deaths in the State, or a gain of 4.4 per cent. over the total number of deaths in the state as a result of public health measures; or an actual saving of 520 lives in the single year of 1915.

On page 15 we present the gain over communicable diseases in graphic form. The large column represents the per cent. of all deaths in the state represented by the number of deaths from communicable diseases. The smaller columns, the combined length of which will equal the length of the large column, shows the proportion represented by each disease.

Starting in 1911, we find that diphtheria represents the greatest proportion of the four lesser diseases. In 1912, diphtheria has come down to a level with whooping cough. In 1913 it has gone down below measles, and from this time on the per cent. of deaths from this disease has remained practically stationary. Measles and whooping cough show some improvement, but their improvement is not as great as it should be.

Table I.
TOTAL DEATHS FROM SIX PREVENTABLE DISEASES.

COUNTIES	Deaths 1911	Deaths 1912	Deaths 1913	Deaths 1914	Deaths 1915
Adams	9	7	6	4	4
Asotin	4	.....	.....	7	7
Benton	9	3	2	4	16
Chelan	17	8	14	10	17
Clallam	5	1	6	5	2
Clarke	22	16	19	13	9
Columbia .....	.....	5	5	3	5
Cowlitz	3	3	4	7	.....
Douglas	4	1	7	13	7
Ferry	2	5	1	6	.....
Franklin	1	2	4	3	2
Garfield	3	4	3	1	5
Grant	6	3	4	5	5
Grays Harbor	31	20	27	20	12
Island	1	2	1	.....	.....
Jefferson .....	.....	2	4	3	.....
King	30	19	29	20	10
Kitsap	15	4	11	8	6
Kittitas	23	10	15	19	10
Klickitat	5	3	3	5	8
Lewis	29	25	33	36	6
Lincoln	10	9	8	6	11
Mason	2	8	.....	1	1
Okanogan	8	4	15	7	6
Pacific	9	13	8	9	3
Pend Oreille	1	2	1	.....	1
Pierce	7	19	31	17	5
San Juan	2	1	1	1	.....
Skagit	17	13	15	8	8
Skamania .....	.....	1	1	2	.....
Snohomish	42	25	34	25	11
Spokane	19	11	17	11	9
Stevens	11	8	8	7	8
Thurston	8	7	9	8	5
Wahkiakum .....	.....	2	.....	1	3
Walla Walla	20	25	21	18	16
Whatecom	15	27	25	15	19
Whitman	30	19	24	26	15
Yakima	30	24	30	33	23
CITIES—					
Seattle	145	90	133	79	36
Spokane	119	64	61	60	57
Tacoma	61	35	63	25	18
Totals.....	330	550	703	545	386
Deaths per 100,000 population.....	69.1	43.0	52.3	38.7	27.6
Per cent. of deaths from all causes.....	7.6	5.4	6.2	4.8	3.2

INFANTILE PARALYSIS.

This disease prevails more or less constantly throughout our country, but at frequent intervals it assumes epidemic character and under such circumstances becomes one of our most

dangerous enemies, not only in the matter of causing deaths, but in the unfortunate results to those who recover.

In the spring of 1916 this disease became epidemic in the city of New York and has continued so up to the present time, spreading from the city of New York throughout the state of New Jersey and Pennsylvania, and at this time is assuming epidemic proportions in Illinois and in some other portions of other states.

Realizing the danger of this disease invading our western states in epidemic form, a meeting of state health officers of the states of California, Oregon, Idaho, Montana, Washington and the Province of British Columbia, was called to meet in Portland Oregon, July 15th, 1916, for the purpose of adopting uniform means of preventing the introduction of infantile paralysis into these states.

Our principal danger, naturally, came from travelers entering our states from infected points. We, therefore, requested the railway companies to notify us of any passengers on their train coming from any state where infantile paralysis prevails, and also to notify us of any children on their train that might appear to the conductor to be sick, regardless of what might be the character of the sickness. Such sick child to be reported to the health officer at point of destination and kept under observation. All passengers from points where infantile paralysis prevails were reported to the health officer at point of destination and kept under observation for a period of 20 days.

The railroad companies cheerfully and willingly gave us every cooperation in our efforts to prevent the introduction of this disease, and up to the present time no more cases of infantile paralysis have been reported in the State of Washington during the year 1916 than were reported during the year 1915, which certainly indicates that the infection has not yet entered our state.

On the 12th of August, 1916, the surgeon general of the U. S. Public Health Service sent a telegram addressed to all state health officers, earnestly requesting representation at a

meeting to be held in Washington, to consider ways and means to prevent the spread of infantile paralysis throughout the country. At this meeting it was a surprise to me to find how much at variance the various requirements were in the eastern states. Each individual locality had authority to, and actually did, promulgate its individual requirements with regard to passengers coming into or leaving the locality, with the result that the New York & New Haven R. R.—a road that would be very short in our western states—showed me 30 different requirements that they had to consider in accepting passengers on their road; thus it was almost impossible for the railroad conductors to know just what was required. It seemed quite as much of a surprise to them that five states and one British Province could get together, formulate and adopt one simple set of regulations. And yet, we feel that it is through the simplicity of these regulations that infantile paralysis has been kept out of our state thus far.

At this point I wish to publicly thank the health departments of Seattle and Spokane for their earnest efforts and willing cooperation in keeping infantile paralysis out of their cities, and by so doing keeping it out of the state. Had these departments not shown this willingness to lend every effort within their power towards the preservation of the health of the people, not only of their cities but the state, your State Board of Health would have found itself financially embarrassed in meeting the situation.

At this time I also wish to express our hearty appreciation to the officials of the various railroads operating in this state, and to their employees, for their earnest cooperation in our efforts to guard the health of the people of the state.

While infantile paralysis has not made its appearance in Washington this year in epidemic form, we must not feel that we are safe. Indeed, experience teaches us that next year is more apt to find us confronted with this disease in epidemic form than is the present year, as it requires ordinarily about a year for such a disease to extend across the continent. We must

therefore be prepared for an emergency during the coming biennium, and we earnestly recommend that an emergency fund be provided, to be used on order of the Governor, in case the state is confronted with any epidemic disease, or with any other problem that cannot be anticipated.

DIPHTHERIA.

Diphtheria is one of the preventable diseases that we know a great deal about. We know just exactly what causes this disease, how it is carried, and how it is transmitted. Knowing these things we know how it can be prevented.

In Table II, I present the number of cases and deaths from diphtheria for the years 1911 to 1915 inclusive, arranged by counties and the three principal cities. I ask that you note the gradual improvement in the number of cases reported in proportion to the number of deaths. It would seem that this disease is very well reported in our state, and with complete reports of any communicable disease its spread can be prevented.

That we have a very good control over this disease in Washington is indicated by the fact that diphtheria causes 1.3 per cent. of all the deaths in the United States, whereas, in the state of Washington it causes only 0.3 per cent. of all deaths. The number of deaths from this disease has been reduced from 101 in 1911, to 38 in 1915, or from 0.95 per cent. to 0.3 per cent. of all deaths. This is probably as low a death rate from this disease as can be secured under present conditions. In order to further reduce the ravages of this disease, it is necessary to hunt out carriers, for we know that this disease is spread by people who are not sick but who carry the germs in their throats. In order to hunt out these cases it is necessary that we have health officers and nurses devoting their entire time to public health work, who can take cultures from the throats of school children and from the throats of other members of a family where there is or has been diphtheria and thus find the sources of infection. We have gone as far with this disease as it is possible to with part-time health officers. To complete the work we must get down to a scientific basis.

Table II.
DIPHThERIA.

COUNTIES	1911		1912		1913		1914		1915	
	Cases	D'ths	Cases	D'ths	Cases	D'ths	Cases	D'ths	Cases	D'ths
Adams	7	.....	8	.....	8	.....	2	.....	.....	.....
Asotin	4	1	.....	.....	.....	.....	9	1	4	1
Benton	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Chelan	5	1	1	1	.....	1	.....	.....	.....	.....
Clallam	16	1	5	.....	5	.....	2	1	2	.....
Clarke	10	1	7	.....	4	1	15	1	43	2
Columbia .....	.....	.....	1	.....	.....	1	2	.....	1	.....
Cowlitz	2	2	5	2	8	1	10	5	2	.....
Douglas	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ferry .....	.....	.....	9	2	.....	.....	.....	.....	1	.....
Franklin .....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....
Garfield .....	.....	1	.....	.....	7	2	.....	.....	.....	.....
Grant .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grays Harbor .....	.....	.....	.....	.....	4	.....	1	3	3	.....
Island	1	.....	.....	.....	.....	.....	1	.....	.....	.....
Jefferson	2	.....	.....	1	.....	.....	9	.....	3	.....
King	25	3	16	1	19	3	13	1	16	5
Kitsap	4	4	4	.....	11	1	5	2	3	.....
Kittitas	1	1	2	.....	.....	.....	1	.....	7	2
Klickitat	3	1	8	1	.....	.....	10	2	5	3
Lewis	10	10	121	8	56	1	34	5	13	1
Lincoln	20	1	5	1	3	.....	4	1	2	.....
Mason	1	.....	1	.....	16	.....	.....	.....	.....	.....
Okanogan	7	3	9	1	1	.....	.....	.....	2	.....
Pacific	10	2	1	1	.....	.....	.....	1	.....	.....
Pend Oreille .....	.....	.....	2	.....	.....	.....	5	.....	.....	.....
Pierce	6	1	8	2	13	1	3	1	3	1
San Juan .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Skagit	3	2	10	3	15	2	2	1	2	.....
Skamania .....	.....	.....	.....	.....	8	.....	.....	.....	.....	.....
Snohomish	12	2	17	3	5	1	9	2	12	3
Spokane	43	9	9	2	15	3	9	.....	8	2
Stevens	5	1	1	.....	2	1	.....	.....	4	1
Thurston	13	1	1	2	4	.....	1	1	.....	.....
Wahkiakum	9	.....	2	1	.....	.....	.....	.....	13	3
Walla Walla	13	1	10	1	.....	.....	5	.....	7	1
Whatcom	29	.....	27	1	26	1	5	2	8	1
Whitman	40	2	1	3	7	1	5	.....	8	1
Yakima	53	10	14	2	13	2	25	1	23	1
CITIES—										
Seattle	279	22	224	11	263	13	153	7	71	2
Spokane	105	9	66	6	47	1	65	4	31	7
Tacoma	131	9	96	7	49	6	43	2	29	1
Totals.....	942	101	686	63	599	43	459	44	339	33
Deaths per 100,000 population	3.4		3.3		3.2		3.1		2.5	
Per cent. deaths from all causes	0.9		0.7		0.4		0.4		0.3	
Fatality	10.7		9.7		7.2		9.5		9.7	

Per cent. of all deaths in registration area in 1913—1.3.
Per 100,000 in registration area in 1913—13.8.

WHOOPIING COUGH.

Whooping cough is ordinarily considered one of those diseases that children must have. It has been found that it is not necessary to have scarlet fever; neither is it necessary to have whooping cough. But, we are told "whooping cough does not amount to anything," and yet, whooping cough causes more deaths year in and year out in the State of Washington than does diphtheria. This is not true for the average throughout the United States, diphtheria causing 1.3 per cent of all deaths in the United States, while whooping cough causes 0.7 per cent of all deaths; but in Washington diphtheria causes 0.3 per cent of all deaths and whooping cough 0.36 per cent of all deaths, often going as high as one per cent of all deaths.

In Table III we present the number of deaths from whooping cough and cases reported in 1911 to 1913 inclusive, arranged according to counties and the three principal cities.

Table III.
WHOOPING COUGH.

COUNTIES	1911		1912		1913		1914		1915	
	Cases	D'ths	Cases	D'ths	Cases	D'ths	Cases	D'ths	Cases	D'ths
Adams	85		1	1	1					
Asotin									7	3
Benton						1			89	4
Chelan			4	1	1				3	3
Clallam	4		4		15		15			
Clarke				1		6	5	2	4	2
Columbia			14		8	1	29		2	
Cowlitz			3							
Douglas	2		4		10	1				
Ferry			20					3	1	
Franklin	2					1		1		
Garfield			20	1					6	
Grant										
Grays Harbor	2	6	11	1	2	2		7	20	
Island			1	1	1	1			6	
Jefferson	3				18	1	10		3	
King	6	6		2		7	37	4		
Kitsap		1	31	2						
Kittitas	1	1	3	2		2	46	8		
Klickitat				2	3					
Lewis		1	5	4	1	2		7	7	
Lincoln	2		2		30	4	2		8	
Mason	2	1	8	1	5				49	
Okanogan					3	1		2		1
Pacific			1	7		1	2			
Pend Oreille					2	1			16	1
Pierce	19		16	3	30	7	7	3	5	
San Juan	3	1					20			
Skagit				5		4			2	
Skamania				1						
Snohomish		3	3	4	6	4	1	5	2	
Spokane			4		15	3		2	17	2
Stevens		1		1	29	4			10	
Thurston		1		1		2		1		1
Wahkiakum										
Walla Walla		3		3				1		1
Whatcom			11	6	7	7	4	1	3	2
Whitman	15	3	43	2			21		34	2
Yakima	20	13	32	2	8	1	6	2	7	
CITIES—										
Seattle	137	20	188	6	298	32	205	10	490	4
Spokane		11	35	6	203	10			1,060	16
Tacoma		4		5	4	7		1	12	1
Totals.....	302	76	464	71	695	114	410	60	1,859	43
Deaths per 100,000 population	6.3		5.5		8.5		4.3		2.9	
Per cent. deaths from all causes	0.7		0.7		1.0		0.5		0.36	
Fatality	25.1		15.0		16.4		14.6		2.3	

Per cent. of deaths in registration area for 1913, 0.7.
Per 100,000 population in registration area for 1913, 10.0.

MEASLES.

This is another disease that is considered necessary, and yet we know that in only two of the years under consideration has the death rate from this disease in the State of Washington been as low as that from diphtheria. The same remarks apply to measles as apply to whooping cough.

In Table IV we present the number of cases and deaths from measles reported in 1911 to 1915 inclusive, arranged according to counties and the three principal cities.

Table IV.
MEASLES.

COUNTIES	1911		1912		1913		1914		1915	
	Cases	D'ths	Cases	D'ths	Cases	D'ths	Cases	D'ths	Cases	D'ths
Adams	8	1	5	.....	1	1	.....	.....	3	.....
Asotin	2	.....	.....	.....	2	.....	4	.....	275	1
Benton	40	2	.....	.....	.....	.....	.....	.....	280	4
Chelan	55	6	56	.....	10	.....	9	.....	7	4
Cllallam	5	.....	1	.....	245	2	1	1	4	.....
Clarke	11	4	.....	.....	13	1	169	.....	4	.....
Columbia	45	.....	17	.....	251	.....	182	1	7	.....
Cowlitz	1	.....	8	.....	.....	.....	18	2	2	.....
Douglas .....	.....	.....	.....	.....	31	2	1	3	6	.....
Ferry .....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....
Franklin	6	.....	.....	.....	2	.....	1	.....	1	.....
Garfield	16	.....	148	.....	4	.....	63	.....	5	3
Grant .....	.....	.....	21	1	12	.....	4	2	.....	.....
Grays Harbor	3	2	1	1	48	3	6	1	12	.....
Island	14	1	1	.....	2	.....	40	.....	4	.....
Jefferson	10	.....	.....	.....	26	1	3	.....	55	.....
King	106	1	20	.....	77	6	6	.....	15	.....
Kitsap	43	2	17	.....	85	3	181	.....	6	.....
Kittitas	23	2	8	.....	6	3	.....	3	1	.....
Klickitat	2	.....	.....	.....	1	.....	18	.....	2	.....
Lewis	83	.....	2	.....	57	2	43	1	3	.....
Lincoln	79	1	7	.....	81	2	19	.....	6	1
Mason	20	.....	1	.....	.....	.....	.....	.....	.....	.....
Okanogan	14	.....	30	1	6	.....	20	.....	8	.....
Pacific	252	2	3	.....	12	.....	78	2	.....	.....
Pend Oreille	12	.....	69	1	.....	.....	2	.....	4	.....
Pierce	56	.....	8	.....	125	5	1	.....	20	.....
San Juan .....	.....	.....	.....	.....	6	.....	.....	.....	1	.....
Skagit	15	.....	8	1	17	3	12	.....	.....	.....
Skamania	5	.....	2	.....	15	.....	2	.....	.....	.....
Snohomish	119	4	14	1	128	2	325	4	19	.....
Spokane	142	1	141	.....	31	2	57	3	18	.....
Stevens	4	1	.....	.....	3	.....	.....	.....	30	2
Thurston	3	1	.....	.....	.....	1	.....	.....	.....	1
Wahkiakum	6	.....	.....	.....	.....	.....	14	.....	.....	.....
Walla Walla	2	.....	.....	.....	129	7	78	1	4	.....
Whatcom	8	1	77	1	269	4	10	1	6	.....
Whitman	78	4	19	.....	43	.....	137	6	37	.....
Yakima	81	9	137	.....	471	2	521	6	20	.....
CITIES—										
Seattle	2,275	10	420	1	2,274	23	325	2	336	.....
Spokane	373	5	1,133	7	237	1	1,408	9	313	.....
Tacoma	54	4	18	1	643	16	23	1	23	.....
Totals.....	4,546	64	2,332	16	5,365	92	4,331	49	1,436	16
Deaths per 100,000 population	5.3		1.3		6.1		3.4		1.1	
Per cent. deaths from all causes	0.6		0.16		0.9		0.4		0.13	
Fatality	1.4		0.6		1.7		1.1		1.1	

Per cent. of all deaths in registration area, 0.9.

Per 100,000 population deaths in registration area, 12.3. 1913 unusually high year.

SCARLET FEVER.

Our people have learned that it is not necessary for children to have scarlet fever. The result is that the per cent of deaths from this disease has been greatly reduced from 0.4 per cent in 1911, to 0.06 per cent in 1915.

If such results can be secured in scarlet fever, equally good results can be secured in measles, whooping cough, diphtheria, typhoid fever, or any other preventable disease.

In Table V we present the number of cases and deaths from scarlet fever in 1911 to 1915 inclusive, arranged according to counties and the three principal cities.

Table V.
SCARLET FEVER.

COUNTIES	1911		1912		1913		1914		1915	
	Cases	D'ths	Cases	D'ths	Cases	D'ths	Cases	D'ths	Cases	D'ths
Adams	16	1	1	.....	1	.....	.....	.....	.....	.....
Asotin	39	.....	1	.....	.....	.....	19	.....	.....	.....
Benton .....	.....	.....	21	.....	1	.....	.....	.....	.....	.....
Chelan	7	.....	16	.....	12	3	4	.....	9	.....
Clallam	19	1	26	.....	17	.....	.....	1	.....	.....
Clarke	55	5	57	5	20	1	17	3	9	.....
Columbia	38	.....	5	.....	1	.....	.....	.....	.....	.....
Cowlitz .....	.....	.....	1	.....	15	.....	1	.....	.....	.....
Douglas	6	.....	6	.....	4	2	22	3	29	1
Ferry	1	.....	2	.....	.....	.....	22	.....	7	.....
Franklin	34	.....	.....	.....	1	.....	4	.....	.....	.....
Garfield	16	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grant	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grays Harbor	101	6	6	.....	11	.....	2	1	16	.....
Island	5	.....	.....	.....	.....	.....	8	.....	12	.....
Jefferson	16	2	27	.....	5	.....	15	.....	5	.....
King	79	3	7	2	19	1	14	.....	43	.....
Kitsap	12	1	1	.....	5	.....	1	.....	6	.....
Kittitas	28	2	22	1	18	3	11	8	13	.....
Klickitat	10	.....	4	.....	25	.....	15	.....	23	.....
Lewis	4	1	51	.....	36	.....	31	2	24	.....
Lincoln	33	3	2	2	3	.....	7	.....	19	1
Mason	12	.....	.....	.....	5	.....	.....	.....	5	.....
Okanogan	1	.....	2	1	4	.....	.....	1	3	.....
Pacific	5	.....	5	.....	6	.....	2	1	16	.....
Pend Oreille	7	.....	4	.....	1	.....	.....	.....	.....	.....
Pierce	44	1	8	1	12	.....	30	.....	4	.....
San Juan	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Skagit	22	1	4	.....	5	.....	16	.....	6	.....
Skamania	1	.....	1	.....	8	.....	.....	.....	.....	.....
Snohomish	25	1	45	2	88	2	29	1	37	.....
Spokane	80	1	29	.....	20	.....	12	.....	19	.....
Stevens	10	1	6	.....	7	.....	10	.....	5	.....
Thurston	17	1	34	.....	.....	.....	1	.....	4	.....
Wahkiakum	13	.....	5	.....	2	.....	.....	.....	.....	.....
Walla Walla	27	1	3	.....	20	1	10	.....	6	.....
Whatcom	108	1	25	4	77	.....	7	.....	5	.....
Whitman	35	.....	28	.....	33	1	27	.....	3	.....
Yakima	39	.....	19	.....	18	.....	59	.....	58	.....
CITIES—										
Seattle	265	6	139	2	147	6	156	3	141	1
Spokane	203	7	93	2	79	7	191	2	84	3
Tacoma	130	8	60	1	85	3	59	1	52	1
Totals.....	1,569	52	776	23	811	30	785	22	682	7
Deaths per 100,000 population	4.3		1.8		2.2		1.5		0.5	
Per cent. deaths from all causes	0.4		0.2		0.26		0.18		0.06	
Fatality	3.3		2.9		3.7		2.8		1.0	

Per cent. of all causes in registration area, 0.6.
Per 100,000 population in registration area, 3.7.

TYPHOID FEVER.

The prevalence of typhoid fever may be considered an index of the sanitary conditions of any locality. How prevalent this disease is in the various portions of our state is indicated in Table VI.

The State of Washington occupies the enviable position of having a remarkably low death rate. This low death rate is a valuable asset to the state. Its value is beyond estimate. The value of this asset will increase as it becomes more thoroughly recognized. As evidence of the recognition now given to our low death rate, your attention is respectfully called to the report of Mr. Louis I. Dublin, on page 63 of this report; and as to the efficiency of your State Board of Health in the matter of preventing sickness and death, you are respectfully referred to the report of Dr. W. A. Evans, on page 41 of this report.

All young and sparsely settled states have a low death rate. As the population increases and the country becomes more densely settled, the death rate will increase, unless the efforts on the part of the people to maintain sanitary conditions are increased in the same ratio as the population increases. The question, therefore, is "Will Washington maintain her low death rate?" Not "Can Washington maintain her low death rate," for she can if she will.

During the last five years typhoid fever has been materially reduced in this state. In 1911 typhoid fever caused 2.1 per cent of all deaths in the state, whereas, in 1915 it caused only 1 per cent of all deaths in the state. And yet, we do not show a remarkably low death rate from this disease. For instance, we find that in 1913 typhoid fever caused 1.3 per cent of all our deaths, whereas the average for the United States was 1.2 per cent. In other words, Washington was a little above the average in deaths from typhoid in 1913. But let us see what the death rate was from typhoid fever in some of the other states during 1913. We find that Indiana showed that 1.9 per cent of all her deaths were due to typhoid, while Massachusetts showed 0.52 per cent, Vermont 0.59 per cent, Kentucky 3.2 per

cent and North Carolina 3.4 per cent. Vermont, Wisconsin and Massachusetts are preventing typhoid among their people. Kentucky and North Carolina are, undoubtedly, not taking the proper sanitary precautions and are permitting their streams and water supplies to become contaminated and to remain contaminated. Indiana compares very favorably with Washington. While her per cent. of deaths from typhoid is slightly higher than Washington, it must be remembered that Indiana is a much older state than Washington and that her territory is much more thickly populated, thus furnishing greater opportunity for infection of her water supplies. As the State of Washington becomes more thickly settled, our streams and water supplies will become contaminated and our deaths from typhoid fever and enteritis and other bowel troubles will increase. Whitman county is today pretty well populated. If you will note the cases reported from this county and the number of deaths in proportion, you will have a fair idea of the increase in this disease with increased population. Our streams are not extensively contaminated today. They can be protected at a proportionately small cost, whereas our old eastern states have spent many millions of dollars trying to get the contamination out of their streams that was put there before the danger of pollution was recognized. This state has the advantage of our older states in possessing the knowledge relative to the danger of polluted waters, and she has the economic advantage of the older states in that she can now protect her streams at a nominal cost, whereas, the removal of pollution from a stream, once it is permitted to enter, becomes a very expensive problem.

At our last legislature a bill was introduced providing for the protection of the water supplies in this state. This bill passed the House with very little opposition but was never considered in the Senate, the Senate having adjourned before they reached this measure. We sincerely trust that this legislature will enact such a bill into law.

This report is intended to present to you cold-blooded facts and not to be considered as an advertisement of the work of the State Board of Health. If it were our intent to make the best possible showing in the work done, without regard to its actual influence, we would make our report entirely on the reduction

in deaths, as based on the estimated population of our state. This would indicate that the death rate per 100,000 population from typhoid fever has been reduced from 18.2 in 1911, to 8.2 in 1915. It is our desire to face the issue squarely, in order that we may realize what must reasonably be expected in the future and the efforts that must be made if Washington is to maintain her enviable death rate.

Table VI.
TYPHOID.

COUNTIES	1911		1912		1913		1914		1915	
	Cases	D'ths	Cases	D'ths	Cases	D'ths	Cases	D'ths	Cases	D'ths
Adams	20	3	16	1	15	2	11	4	8	.....
Asotin	1	1	3	.....	10	.....	2	4	2	2
Benton	18	5	15	2	3	.....	18	1	18	6
Chelan	32	6	24	4	16	5	17	5	15	4
Clallam .....	.....	.....	2	1	8	2	6	1	2	1
Clarke	10	1	6	8	18	2	11	4	18	1
Columbia	4	.....	2	2	30	3	43	2	35	1
Cowlitz	11	.....	5	.....	3	1	5	.....	3	.....
Douglas	9	4	17	.....	5	2	3	3	8	2
Ferry	2	1	4	3	1	.....	2	1	5	.....
Franklin	15	.....	2	.....	4	1	2	.....	2	1
Garfield	5	2	6	2	6	1	4	1	6	1
Grant	1	2	.....	1	3	2	.....	1	.....	2
Grays Harbor	12	7	13	5	11	5	5	3	10	1
Island	2	.....	14	1	.....	.....	.....	.....	.....	.....
Jefferson .....	.....	.....	.....	1	1	.....	4	3	2	.....
King	31	4	11	5	9	2	10	2	16	.....
Kitsap	2	3	2	.....	5	1	2	.....	3	1
Kittitas	13	7	9	2	8	2	10	2	26	5
Klickitat	5	1	10	.....	6	2	2	1	5	1
Lewis	23	8	56	3	342	19	61	14	32	1
Lincoln	24	3	13	3	7	1	23	2	44	3
Mason .....	.....	.....	1	.....	.....	.....	2	1	2	.....
Okanogan	19	.....	7	.....	4	4	8	1	20	2
Pacific	11	2	7	2	4	2	.....	.....	.....	.....
Pend Oreille	17	.....	14	.....	.....	.....	2	.....	.....	.....
Pierce	10	1	16	6	1	3	25	5	11	1
San Juan	1	.....	3	1	.....	.....	.....	.....	.....	.....
Skagit	26	4	2	4	7	3	7	5	10	4
Skamania	2	.....	1	.....	1	.....	.....	.....	1	.....
Snohomish	13	14	20	4	27	10	33	7	35	3
Spokane	23	3	33	5	12	3	9	1	7	1
Stevens	3	5	4	2	9	1	8	3	19	3
Thurston	2	2	10	4	19	5	11	5	12	1
Wahkiakum .....	.....	.....	1	1	.....	.....	.....	.....	.....	.....
Walla Walla	17	10	16	12	27	7	33	6	77	10
Whatcom	14	7	20	5	10	.....	20	5	12	7
Whitman	42	8	12	5	21	8	13	4	36	6
Yakima	169	29	76	7	115	4	33	5	104	14
CITIES—										
Seattle	199	27	149	21	142	14	94	22	62	9
Spokane	258	41	137	21	68	10	93	17	74	14
Tacoma	31	16	7	11	50	11	46	8	35	3
Totals.....	1,102	227	776	160	1,023	133	733	149	327	121
Deaths per 100,000 population	18.2		12.5		10.2		10.5		8.2	
Per cent. deaths from all causes	2.1		1.5		1.2		1.3		1.0	
Fatality	20.6		20.6		13.4		20.3		14.6	

DIARRHEA AND ENTERITIS.

This disease is a close relative of typhoid fever. It occurs in infants and is due to insanitary conditions.

Our death rate in this disease is much lower than that of the older states. That this low death rate is not entirely due to sanitary conditions is shown by the fact that our death rate from typhoid fever is not much if any lower than that of other states. Therefore, our climatic conditions must have much to do with the low death rate from enteritis, as it has to do with the low death rate in infants from all diseases. Our death rate from diarrhea and enteritis, considering the climatic conditions, is entirely too high. It can and should be reduced, but to accomplish this is a man's job and not a child's job, and it is an undertaking that requires the entire time, thought and effort of the men who are to accomplish these results.

In Table VII we present the number of deaths reported from this disease in 1911 to 1915 inclusive, arranged by counties and the three principal cities.

Table VII.
DIARRHEA AND ENTERITIS.
(Under 2 years)

COUNTIES	Deaths 1911	Deaths 1912	Deaths 1913	Deaths 1914	Deaths 1915
Adams	4	5	2	.....	4
Asotin	2	.....	.....	2	.....
Benton	2	1	1	3	2
Chelan	4	2	5	5	6
Clallam	3	.....	2	1	1
Clarke	11	2	8	3	4
Columbia .....	.....	3	.....	.....	4
Cowlitz	1	1	2	.....	.....
Douglas .....	.....	1	.....	4	4
Ferry	1	.....	1	2	.....
Franklin	1	2	2	2	1
Garfield .....	.....	1	.....	.....	1
Grant	4	1	2	2	3
Grays Harbor	10	13	17	5	11
Island .....	.....	.....	.....	.....	.....
Jefferson .....	.....	.....	2	.....	.....
King	13	9	10	13	5
Kitsap	4	2	6	1	5
Kittitas	15	5	5	3	3
Klickitat	3	.....	1	2	4
Lewis	9	5	14	7	4
Lincoln	2	3	1	3	2
Mason	1	2	.....	.....	.....
Okanogan	5	1	10	3	3
Pacific	3	3	5	5	3
Pend Oreille	1	1	.....	.....	.....
Pierce	4	7	15	8	3
San Juan	1	.....	1	1	.....
Skagit	10	5	3	2	4
Skamania .....	.....	.....	1	2	.....
Snohomish	18	6	15	6	5
Spokane	5	4	6	5	4
Stevens	2	5	2	4	2
Thurston	2	.....	1	1	2
Wahkiakum .....	.....	.....	.....	1	.....
Walla Walla	5	9	6	10	4
Whatcom	6	10	13	6	9
Whitman	13	9	14	16	6
Yakima	19	13	21	19	8
CITIES—					
Seattle	60	49	45	35	20
Spokane	46	22	32	28	17
Tacoma	20	10	20	12	7
Totals.....	310	212	291	221	161
Deaths per 100,000 population.....	25.1	16.5	21.7	15.7	10.9
Per cent. of deaths from all causes.....	2.8	2.1	2.5	1.9	1.3

Per cent. of all deaths in registration area in 1913—5.3.
Per 100,000 deaths in registration area in 1913—73.2.

FIELD WORK.

During the biennium the State Board of Health has been called on to make numerous investigations relative to sanitary conditions and other matters pertaining to public health in various parts of the state. In addition we have been called upon to deliver public addresses relative to the preservation of health before various clubs, public meetings, etc. The total of this class of work amounts to the following:

Number of investigations relative to sanitary conditions.....	207
Number of investigations relative to vital statistics.....	175
Number of visits relative to questionable diagnosis.....	115
Number of investigations relative to water supplies.....	294
Number of public talks.....	142

It is not advisable to set forth in detail all of the work done on each of these visits, but we submit herewith a few instances illustrating the character of the investigations made.

INVESTIGATION OF TYPHOID FEVER IN DAVENPORT.

In March, 1915, we were notified that a number of cases of typhoid fever had developed in the city of Davenport, Lincoln county. Accordingly, the Commissioner went to Davenport to investigate conditions there.

The question of the milk supply being the foundation of the typhoid fever outbreak was immediately raised. It was found that the cases of typhoid did not follow the route of any single milkman, but cases occurred among the patrons of all dairy-men supplying the city with milk, and that in no instance did the majority of cases appear among the patrons of any one dairyman, thus eliminating the milk problem.

A very casual observation of the water supply of the city indicated that their well was certainly open to pollution, and analysis of the water made at the laboratory of the State Board of Health showed that the water was polluted. Their water supply was pumped from a shallow well. The city marshal, who was also in charge of the waterworks, stated that the entire supply of water entered the well from the side opposite to that

along which a small creek flowed, said creek carrying the usual pollution of a creek flowing through a small town. While this might appear to be true, it was nevertheless evident to me that seepage might enter the well from the creek side, and in addition to this the main sewer line of the town lay between the creek and well, and a small break in the sewer could easily result in contamination of the well. At the time that this well was dug, another well located on the hill above went dry, and on investigation we found that the well that had gone dry when the city well was dug was now being used as a cesspool. In addition to this there were toilets and other sources of contamination on the hill above the well.

As an emergency procedure I advised the immediate installation of a hypochlorite treatment of the water. Upon request of the mayor of Davenport, Prof. W. F. Allison, of the State University, came to Davenport and installed a chlorine plant for them. This was advised as a temporary measure but its use is being continued and a new water supply has not been secured. The use of a hypochlorite plant, unless it is under the constant supervision of one who understands the importance of management of such plant, is not satisfactory, and as a result, cases of typhoid fever are more or less frequent in the town of Davenport.

This instance is simply another evidence of the importance of the enactment of the law asked for by the State Board of Health on several occasions; namely, a law giving the State Board of Health authority to absolutely condemn as impure a polluted water supply, and to protect from pollution the public water supplies of the state.

INVESTIGATION OF THE YAKIMA RIVER.

This problem has confronted the State Board of Health for a number of years. The Yakima river does not constitute the water supply of any city, but it is the natural water supply for the people living on the very extensive irrigation projects located along this water course, and while these people do not

constitute a city or town, they are entitled to receive from the state protection of their water supply.

Into the Yakima river the sewage from Cle Elum, Ellensburg and North Yakima is discharged without any pretense of purification, thus polluting the waters to a high degree and endangering the health and lives of those who must depend on this supply for domestic purposes. And not only does it endanger the health and lives of the residents of this portion of the state but it is an especial menace to the stranger or the traveler. The residents of the community know that the water is polluted, but the stream is an unusually clear body of water and a stranger traveling through this district is apt to camp upon the banks of the stream and to use this water for drinking purposes. Under the existing laws the correction of such a condition proceeds extremely slow, as illustrated by the fact that a suit filed by the county commissioners of Yakima county against the city of North Yakima in the matter of pollution of this stream with sewage, is still pending, it not having come to a hearing of any nature whatsoever. The Yakima river should either be protected from pollution or declared a "sewage stream," and marked by signs along its course that its waters are not fit for human consumption.

INVESTIGATION OF SANITARY CONDITIONS.—RAINIER NATIONAL PARK.

Rainier Park is a federal reserve and sanitary conditions therein naturally come under the supervision of the federal department. However, as so many of the citizens of Washington visit this park, I deemed it advisable to study the sanitary conditions on this federal reservation. Accordingly, in June, 1915, accompanied by Mr. Finney of the federal department, I visited Rainier Park and made a number of suggestions relative to comfort stations at camps in the park, and relative to establishing specified camping points at which comfort stations could be provided. These suggestions were accepted very promptly by the federal representative, and on visiting the park again in August, 1916, I found that every suggestion made by me had

been thoroughly carried out, so that today the people of Washington or of the United States can visit Rainier National Park with thorough assurance that they will be surrounded by sanitary conditions at all times.

LOGGING CAMP INVESTIGATION.

In August, 1916, a number of cases of typhoid fever developed in a logging camp near Sedro Woolley. This camp was kept in an unusually sanitary condition and yet 22 cases of typhoid fever developed among 125 employees, and all of these cases within a very short period.

The study of this outbreak was especially interesting. It presented a three-sided problem; namely,

1st. It was found that the water at the farm from which the milk supply was secured and which was used for washing the milk vessels was polluted.

2nd. It was also found that the water supply of the camp showed evidence of pollution and thus might be a source of infection.

3d. Finally, it was found that the cook at the camp was actually suffering from a case of walking typhoid.

Any of these three conditions might result in a severe outbreak of typhoid fever in the camp. However, on the 29th of August the milk supply was discontinued and all water used in the camp was boiled. The last case of typhoid fever developed on September 9th. It would appear therefore, that either the milk supply or the water supply was the source of contamination. However, a further study shows that out of 125 men at work in the camp about 45 of them lived at the camp all the time and secured all of their water for drinking purposes from the source supplying the camp, while about 80 of the men were employed at cutting timber some distance from the camp, and while employed on this particular cutting they secured their drinking water from another stream—a very small stream—and on investigation we found that the men had used the bank of this stream for toilet purposes. A further study showed that

of all the men developing typhoid, 19 of them were among the 80 employed on this last mentioned work, while only three of those who used only the camp drinking water developed typhoid, and these latter three might well be accounted for by contact with those who became infected away from the main camp.

A further study of the milk supply problem showed that milk from the same source had been used by a number of families and that none of them had developed typhoid fever. It would therefore appear that with three apparent and permanent sources of infection, the real outbreak occurred as a result of a condition least apparent of all, thus demonstrating the necessity of complete and thorough study in such problems.

SANITARY SURVEY OF THE CITY OF CENTRALIA.

SEATTLE, WN., October 6, 1916.

Hon. John Galvin, Mayor, Centralia, Washington.

DEAR SIR: In compliance with your request of September 22d, I, together with Mr. T. R. Wilbur, Sanitary Inspector of this department, went to Centralia on October 2d, and conducted a sanitary survey of your city, as a result of which I have the honor to report as follows:

General Conditions.

It is but fair to the city of Centralia that I state at the outset that from a sanitary standpoint the city makes a very favorable showing indeed, being better than that of the average city of approximately 10,000 population. However, certain facts must be considered in connection with the condition found. It must be remembered that as a result of the epidemic of typhoid fever in 1913-1914, the city was given a very thorough cleaning and a complete and sanitary investigation, as a result of which practically every toilet within the city limits was connected with a sewer, if located in a sewer district, or placed in a sanitary condition. It is said that once a city is thoroughly cleaned up it will remain clean. This is true only to a certain extent. A large portion of it, or a large per cent, of it will remain clean, but a small proportion will become careless and insanitary conditions will spring up at various points and endanger the whole population unless constant sanitary inspection is maintained. As a result of this, we noted in Centralia some "sore spots" that have resulted from the lack of constant observation during the last 18 months, or such matter.

The Survey.

In our study of Centralia we went through each alley within the city limits, with the exception of a few blocks on the outskirts of the

city, said blocks containing only one or two houses to a block. In this survey we noted:

1st. The number of toilets in each locality not connected with a sewer.

2nd. The number of instances in which manure was improperly disposed of.

3d. The number of instances in which garbage was improperly cared for.

I submit herewith a spot map showing the number of each condition found; the red dots indicating toilets, the green dots points at which garbage was improperly disposed of, and the black dots points at which manure was improperly disposed of. The red dots do not indicate insanitary toilets in every instance. Some of them are in very good sanitary condition, but they do indicate the points at which there is danger from infection arising. The black dots indicate that manure is improperly disposed of. In several instances, however, properly constructed manure boxes were provided, but as an evidence of carelessness arising from lack of constant inspection, we found manure boxes standing wide open, even though they may have been provided with perfectly good tops. Under such circumstances a manure box is absolutely useless from a sanitary standpoint. Improper garbage disposal consisted in all kinds of makeshifts, from throwing garbage on the ground, open boxes, open leaky barrels, to properly constructed garbage cans, but without tops or with the tops left off.

Referring to the spot map submitted herewith, you will note that there are 298 red dots, indicating toilets not connected with sewers. Of these 37 are located in sewered districts. Your city ordinance provides that all toilets in sewered districts must be connected with sewer. Here are 37 instances in which your city ordinance is being violated. There are 139 green dots, indicating insanitary methods of disposing of garbage, and in all, 15 instances in which manure is improperly disposed of.

The dots are placed simply so as to indicate the block in which the condition was found and not intended to be placed on the particular lot, as this could be done only in the case of an engineer accompanying the inspectors and would have required several weeks in process of survey. However, they indicate sufficiently accurately for your police force to locate these conditions and see that they are corrected and that toilets are placed in sanitary condition in every instance.

One flagrant condition in the city of Centralia is the open ditch known as China ditch, running through the city. This ditch will ever be a dumping ground for the people living on or near it. Such action could be prevented only by the constant patrolling of the ditch at all times. While I realize this insanitary condition cannot be promptly corrected, it should be the aim of the city of Centralia, as soon as its financial condition will permit, to flume this ditch through the city.

In regard to the water question, and especially the connection at the Eton mills, we found the water used at the Eton mills to be identical with that used in the city, it being the overflow from the city water supply and is conducted to the reservoir at the mills and pumped from this reservoir. There is a connection, or means of connection would be a better expression, between the city water mains and the water mains at the mills. There is a valve at the end of the city main and another at the end of the mains supplying the mill. There is a pipe between these valves connecting the city water main with the mill mains. These two valves are constantly closed, but as an additional precaution a break is made in the pipe between the valves, which break is open at all times and would be closed only in case of a disastrous fire at the mill.

Samples of water were taken from the sanitary fountain at the mill, which fountain receives its water from the city water mains and from the pipe at a point before it empties into the mill reservoir, and from the pump after the water has been pumped from the mill reservoir. Bacteriological examination of all these samples show the same result, namely, that the water is all of the same character and none of it shows evidence of pollution.

It has been reported that the water from the mill pond is pumped into the mains at the mill. This is not true. There is a pipe provision, which is securely closed, whereby the mill pond water can be turned in to the mill reservoir in case of a fire at the mill of such gravity that the flow from the present supply would not be sufficient. This condition is identical with that of the city of Centralia, whereby water can be pumped from the old contaminated city water supply into the mains of the city supply in case of a disastrous fire in the city. Either of these unforeseen accidents would result in contaminating the water pipes, first of the mill in case it did not become necessary to use the city water supply; second, of the city water pipes in case it did become necessary to use the city water supply. In other words, should it become necessary to pump into your mains water from the old contaminated supply, your city pipes would be the first to become contaminated. In either instance there would be sufficient warning to enable your people to take proper precautions and boil the water until the pipes could be freed from contamination.

How can the city maintain a thoroughly sanitary condition? I take it that it is the aim of Centralia to not merely be "as good as other towns" but that you desire to maintain a strictly sanitary city at all times. In order to do this constant sanitary inspection is absolutely necessary. Naturally, the proper officer to make such inspection is your city health officer, but if I remember correctly, your budget provides for the enormous sum for salary of \$120.00 per year for your city health officer. One of the duties of the city health officer is that of registrar of births and deaths. The law provides that registrars of births and deaths, other than city health officers who are on constant

salary, shall receive twenty-five cents for each birth and each death properly recorded. This is just one-half of the fee allowed notary publics, and the work required for recording a birth or death is several times that required of notary publics in taking an acknowledgment. Hence, the fee allowed is certainly sufficiently small. In addition to the registration of births and deaths, your city health officer must receive and make reports of communicable diseases. Each report of a communicable disease requires considerable clerical work. In 1915 there were 230 births and deaths recorded in the city of Centralia. In other words, based on the small fee of 25 cents each for copying and recording a birth or death, your health officer earned \$56.00. Allowing the same fee for communicable disease reports, he probably earned in clerical work a like amount. Practically his entire salary is a salary for clerical work at a nominal fee. In addition to this he is supposed, and I use the word supposed advisedly, to investigate all communicable diseases, to establish quarantine, to disinfect, and to in general enforce the sanitary laws of the state and the city within his jurisdiction. With a salary of \$120.00, at least \$100.00 of which is earned by clerical work alone, you certainly cannot expect this health officer to make the sanitary inspections necessary to see that the "sore spots" noted on the accompanying spot map are corrected.

With your budget provision it would therefore seem to me necessary that this inspection be placed on your police department. If, as demonstrated, it is impossible for me to go through the alleys in your city in two days, would it be unreasonable to expect your police force to go through your alleys each week throughout the year and note the sanitary conditions found therein? It does not seem to me that this would be a prohibitive task and would serve the double purpose of acquainting the police force with conditions in your city, not only with regard to sanitary matters but with regard to fire traps, a number of which I noted in the course of our inspection. If in this work the police officer stops to discuss the subject with each householder where an insanitary condition is found, the task would be greatly multiplied. It seems to me that the proper course to pursue is when an insanitary condition is located, note the character of the insanitary condition and number of house, then notify the householder to come to the police station and explain why such sanitary condition is permitted, or take the consequence as provided by your city ordinances. It is not sufficient to survey the sanitary conditions simply within the sewered district. The words "sanitary sewer" is used advisedly. It is not merely a matter of convenience but a matter of sanitation. If, however, insanitary toilets are permitted within a sewered district, or within a district adjacent to a sewered district, then the sanitary sewer loses half; that is, it simply becomes a sewer without the sanitary. In unsewered districts the toilets should be kept in the most sanitary condition possible, and it is always possible and without great expense to make a toilet entirely sanitary.

I therefore recommend:

1st. That you publish a notice in your local papers warning the people that insanitary conditions with regard to toilets, garbage disposal and manure disposal will not be tolerated, and that after a given time any violations of the city ordinances in regard to these matters will meet with prosecutions.

2d. That you require your police force to patrol a given section of your city each day and report all conditions with regard to toilets, garbage, manure and other insanitary conditions, and also with regard to conditions that may result in fires. That the officer be required to report just what part of the city he patrolled, and that the city be so divided that the entire city limits be covered once each week by your police force. In making these inspections it is necessary that the officer follow the alley instead of the street.

3d. I respectfully suggest that you urge your people to support the bill providing for whole-time health officers and inspectors, which bill will be introduced at the coming session of the legislature. Such a bill would result in frequent sanitary inspections of your city by competent trained sanitary inspectors.

Respectfully submitted,

Commissioner.

These instances, I believe, sufficiently illustrate the character of the work undertaken in the study of insanitary conditions.

WHERE DOES WASHINGTON STAND IN THE MATTER OF PUBLIC HEALTH WORK?

During the winter of 1914 and 1915, Dr. Carroll Fox, surgeon of the United States Public Health Service, made a study of the health work in the State of Washington. This study was made at the request of the State Board of Health. Dr. Fox's report is very comprehensive and goes into the subject very thoroughly.

Dr. Fox estimates that the State Board of Health of Washington should have an appropriation of one hundred and sixty thousand (\$160,000) dollars a year in order to perform thoroughly efficient work. The distribution of this fund, as recommended by him, is set forth in his report.

We have received several inquiries from other states relative to the benefit of such investigation by the Federal Department. To my mind this investigation is well worth while because it is made by a thoroughly competent officer, and one who is not in any way prejudiced for or against the work being done by any individual state. Such studies are going to be made whether we ask for them or not. They will be made by the Federal Government only upon request, but they will be made by others without request. As an illustration, during 1914 Dr. Charles V. Chapin of Providence, R. I., made a study under the direction of the American Public Health Association, of the work being done by the various state boards of health. In Dr. Chapin's report, this state is placed as 24th in the list of states as regards work being done by the Health Department. Dr. Chapin's report does not, however, take into consideration the funds supplied to the State Board of Health by the people of the state. It appears to me that this is an important matter for consideration. We cannot "make brick without straw." Neither can we do the efficient work on 1.08 cents per capita appropria-

tion that other states can do with 10.0 cents or 15.00 cents per capita appropriation.

In May, 1915, Dr. W. A. Evans of Chicago, a thoroughly competent authority, reviewed Dr. Chapin's work and made the following report. The Commissioner can, without being accused of bragging, call your attention to Dr. Evans' findings with regard to the work of the State Board of Health of Washington, in proportion to the funds available, because this report deals with conditions prior to the present Commissioner's appointment. Dr. Evans' report is as follows:

RATING OF STATE BOARD OF HEALTH.

By Dr. W. A. Evans of Chicago.

If you live in Massachusetts, New York or Pennsylvania your health is well looked after, whether your home is in the city or rural district. If you live in a rural district in South Dakota, Missouri or Tennessee you had better look out for yourself, since your state government cares little whether you live or die, whether you get sick or keep well.

Such is the opinion of Dr. Charles V. Chapin, commissioner of health of Providence, R. I. This is no off hand opinion. Dr. Chapin was commissioned by the American Medical Association to make a comparative study of the various state health boards. He spent a year in making this study. He visited every state board except that of Kentucky. His report is issued by the American Medical Association.

This is the way he ranks the boards, 1,000 being perfect.

1.	Massachusetts	745
2.	New York	730
3.	Pennsylvania	716
4.	Minnesota	574
5.	New Jersey	555
6.	Indiana	526
7.	Maryland	507
8.	Kansas	499
9.	Vermont	486
10.	Ohio	462
11.	Rhode Island	432
12.	North Carolina	411
13.	Virginia	397
14.	Kentucky	393
15.	Connecticut	393
16.	Wisconsin	392
17.	Michigan	370
18.	Illinois	346
19.	California	342
20.	New Hampshire	320

21.	Louisiana	315
22.	Mississippi	297
23.	Maine	280
24.	Washington	262
25.	Florida	253
26.	Montana	246
27.	Oregon	227
28.	Iowa	225
29.	South Carolina	165
30.	Utah	161
31.	Georgia	156
32.	Missouri	152
33.	North Dakota	130
34.	Delaware	131
35.	Idaho	127
36.	Tennessee	122
37.	Texas	116
38.	West Virginia	113
39.	Colorado	106
40.	Alabama	105
41.	South Dakota	101
42.	Oklahoma	97
43.	Nevada	94
44.	Arkansas	74
45.	Nebraska	66
46.	Arizona	39
47.	Wyoming	10
48.	New Mexico	0

In scoring departments Dr. Chapin had no precedents. For this reason and also because of the difficulties inherent to the task Dr. Chapin's markings are only approximate. Another person of equal fairness, experience and knowledge with the same facts before him and using the same score card might give a certain state twenty points higher or lower than Dr. Chapin has done, or rank it several notches above or below the position in which he has placed it. I am sure, for one, I would not put North Carolina or Virginia higher than twelfth and thirteenth respectively, and Minnesota lower than fourth.

The ratings are only valuable within certain limits, Dr. Chapin states, but within those limits the ratings are valuable. Clearly the best three departments are those of Massachusetts, New York and Pennsylvania. To that everybody might agree, but when it came to assigning these to positions 1, 2 and 3 there would be much disagreement. These are three old states with large cities likewise old. Health departments evolve gradually. For a good health department the community must have passed through both years and experiences. It is to be expected that these older states should have had better health departments.

Suppose we group the states with scores ranging between 600 and 300 into a second group. We have Minnesota, New Jersey, Indiana, Rhode Island, North Carolina, Virginia, Kentucky, Connecticut, Wisconsin, Michigan, Illinois, California, New Hampshire and Louisiana. I think that we could all agree that each of these states has the nucleus

of a very effective health machine, and that in a few years such machine is likely to rank with that of Massachusetts, Pennsylvania and New York. Furthermore, each has a progressive, growing department.

When it came to details we might not agree. For instance, I do not know how many of us would not say that the Wisconsin health department was entitled to fifty points more than that of California. Suppose we make another group of those departments with a rating between 300 and 100. In this group we would have Mississippi, Maine, Washington, Florida, Montana, Oregon, Iowa, South Carolina, Utah, Georgia, Missouri, North Dakota, Delaware, Idaho, Tennessee, Texas, West Virginia, Colorado, Alabama and South Dakota.

I do not know what we would say of these states and their health departments. Certainly we could agree that they have not done for their people what they should have done. We could agree that some of those near the top of the group have done much and are improving all the time. We could also agree that some of those near the bottom are ossified. Dr. Chapin calls especial attention to the fact that West Virginia has made great progress in the last few years. We could also agree that some are coming along satisfactorily considering such facts as their great expanse and sparse population, lack of financial resource, and lack of age.

Suppose we place those below 100 in the cow's tail group. We have Oklahoma, Nevada, Arkansas, Arizona, Wyoming and New Mexico. This grouping occasions some injustice perhaps. When we read the chapters dealing with South Dakota and Oklahoma we see the injustice of placing these states in separate groups, one of which appears to be markedly more worthy of praise than the other. Those of us who know how much Arkansas has improved in the last five years feel like saying a kind word for that state board. Nevada, New Mexico, Arizona and Wyoming are confronted by great difficulties.

But perhaps the best policy is to leave the rating as they stand in the hope that they may irritate, anger, inflame the legislatures into properly providing for the protection of the people.

Among other details found in this report are the expenditures for health of the different departments. The ranks and amounts follow:

1. Pennsylvania	\$1,047,431 66
2. New York	384,676 85
3. Massachusetts	180,219 14
4. Maryland	142,600 00
5. Illinois	133,919 60
6. Florida	129,012 03
7. New Jersey	125,942 15
8. California	112,953 48
9. Ohio	91,736 25
10. Louisiana	87,491 20
11. Minnesota	72,013 31
12. Indiana	64,719 00
13. North Carolina	61,031 78
14. Texas	48,200 00
15. Kansas	46,430 00

16.	Virginia	45,000 00
17.	Michigan	44,872 07
18.	Wisconsin	38,205 63
19.	South Carolina	36,112 52
20.	Vermont	33,385 50
21.	Georgia	33,311 90
22.	Oklahoma	32,700 00
23.	Iowa	32,568 32
24.	Kentucky	30,002 45
25.	Missouri	29,206 19
26.	Connecticut	27,000 00
27.	Alabama	25,000 00
28.	Montana	23,600 00
29.	Mississippi	22,975 43
30.	New Hampshire	21,200 00
31.	Idaho	19,820 00
32.	Colorado	19,980 00
33.	Rhode Island	19,568 00
34.	Tennessee	16,552 48
35.	Washington	15,240 00
36.	Maine	14,893 24
37.	Oregon	14,000 00
38.	West Virginia	14,000 00
39.	Utah	12,150 00
40.	Nebraska	10,640 00
41.	North Dakota	10,569 38
42.	South Dakota	9,730 00
43.	Arizona	9,300 00
44.	Arkansas	8,970 00
45.	Delaware	8,492 02
46.	Nevada	7,500 00
47.	Wyoming	2,100 00
48.	New Mexico .....	.....

Per capita expenditure in cents. Rank in expenditure and rank as rated by Dr. Chapin:

1.	Florida	15.21	25
2.	Pennsylvania	12.7	3
3.	Maryland	10.54	7
4.	Vermont	9.27	9
5.	Nevada	7.59	43
6.	Montana	5.45	26
7.	Idaho	5.22	35
8.	Massachusetts	4.95	1
9.	Louisiana	4.93	21
10.	New Hampshire	4.81	20
11.	New Jersey	4.47	5
12.	Delaware	4.04	34
13.	California	3.96	12
14.	Arizona	3.76	46
15.	Minnesota	3.25	4
16.	Rhode Island	3.14	11
17.	Utah	2.93	30
18.	Kansas	2.6	8
19.	New York	2.32	2
20.	North Carolina	2.27	12
21.	Indiana	2.24	6
22.	South Carolina	2.19	29

23.	Connecticut	2.09	15
24.	Colorado	1.95	39
25.	Virginia	1.80	13
26.	Maine	1.78	23
27.	Ohio	1.78	10
28.	Illinois	1.61	18
29.	Oregon	1.56	27
30.	Oklahoma	1.48	42
31.	Wisconsin	1.48	16
32.	North Dakota	1.48	33
33.	Michigan	1.46	17
34.	Iowa	1.43	28
35.	South Dakota	1.27	41
36.	Kentucky	1.24	14
37.	Wyoming	1.21	47
38.	Georgia	1.13	31
39.	Mississippi	1.20	37
40.	Texas	1.13	39
41.	Alabama	1.11	24
42.	Washington	1.08	22
43.	West Virginia	1.02	38
44.	Missouri	86	32
45.	Nebraska	85	45
46.	Tennessee	73	36
47.	Arkansas	53	44
48.	New Mexico	..	48

Speaking generally, legislatures will devote funds to their State Boards of Health in proportion as the people are interested in health. In some states the popular interest in health arises from recent unfortunate experiences with paralysing epidemics. For instance, the excellent financial support of the Board of Health in Florida, is due to some epidemic of yellow fever ten or twenty years ago.

Roughly the health sentiment of a state is a measure of the efficiency of the state board as an educator. These statements being true, state boards cannot wholly escape responsibility for small appropriations for their support. However, bricks cannot be made without straw. Health work cannot be done without money.

Suppose we try to rerate certain states as modified by their per capita expenditures for health. In order to do as little injustice as possible let us consider on the excellent list only those states in which the per capita expenditure rating is at least ten lower than the grade of work rating. Let us consider as in the poor showing class only those states in which the expenditure rating is ten or more higher than the grade of work rating. Furthermore, since the distances are so great and the population so sparse in Idaho, Nevada, Utah, Arizona, and New Mexico, let us exclude them from the list.

Excellent Showing.

Washington, Mississippi, New York, Ohio, Michigan, Indiana, Wisconsin, Virginia, Kentucky, Missouri, Minnesota, Kansas, Illinois, and Tennessee in the order named.

Good Showing.

North Carolina, Connecticut, Massachusetts, Georgia, New Jersey, Iowa, West Virginia, Maine, Arkansas, Oregon, Alabama, Nebraska, Pennsylvania, North Dakota, Texas, Maryland, Vermont, Rhode Island, South Dakota, California and South Carolina in the order named.

Poor Showing.

New Hampshire, Louisiana, Oklahoma, Colorado, Montana, Delaware, ending with Florida making the poorest showing of all.

Fortunately the State Board of Health is not our only agency protecting against diseases and making for health. Many of us live in cities and are also protected by the local health department. The federal government helps in certain directions. Some of us are employed in industries which strive to protect the health of their employes. There are various societies for promoting health. Nor should we forget the activities of the practitioners of curative medicine. The preface of Dr. Chapin's report indicates that there may be later reports on the federal activities of health, local health departments, and societies for the promotion of health.

You will note in this report that the State of Washington ranks as 42d in the list of states relative to appropriation per capita for public health work. Standing at 42 in appropriation, ranking as 24th in public health work, without regard to appropriation, and standing first in the character of work performed in proportion to the funds available, is it not reasonable to assume that given an appropriation in proportion to that allowed other states, that your State Board of Health can and will stand at the top of the list without any qualifying adjectives?

In estimating the amount of work done with per capita appropriation, there is one point that has not been taken into consideration by Dr. Evans in his study, namely, the area covered or the density of the population. An appropriation of five cents per capita in Massachusetts would be a far more liberal appropriation than one of 10 cents per capita in the State of Washington, because of the area necessary to cover in the work. The less densely populated a state is the greater per capita appropriation necessary to accomplish the same end.

As already stated, Dr. Carroll Fox of the United States Public Health Service, considers that an appropriation of

\$160,000 per year for the State Board of Health alone is needed. We believe, however, that an appropriation of eight cents per capita, or \$125,000 per year, will enable the State of Washington to stand at the head of the list of states in public health work, and, in addition, will provide for the appointment of 15 men, devoting their entire time to public health work in the various parts of the state, and sufficient nurses and sanitary inspectors to thoroughly rid the state of preventable diseases. It would be extremely difficult to secure competent men to enter upon this work unless they had assurance that sufficient funds to continue it would be permanently provided. We, therefore, recommend that the money for public health work in the State of Washington be raised by a special tax of one-fifth mill annually.

LABORATORY.

The laboratory may well be designated as the heart of a public health department. It is through the efforts of these workers in the back-ground, if I may use the term, that public health work has been enabled to make the rapid strides it has made during the last 20 years, and it is through the efforts of these workers that we must hope to find the means by which we can control diseases regarding which we are now in the dark, such as infantile paralysis, etc.

The laboratory of the State Board of Health is inadequately equipped both in regard to material and employes. For a number of years Dr. E. P. Fick has performed the work of this laboratory at a nominal salary, to the detriment of his private practice and his personal income. Dr. Fick's interest in the laboratory has not diminished, but it did not appear right or just that Dr. Fick should be called upon to make such personal sacrifice. However, Dr. Fick remains on our staff today as Consultant Bacteriologist, and at no time does he hesitate to make any sacrifice in order to give us the benefit of his long and honorable experience in laboratory questions.

In June, 1915, we secured Dr. Maria K. Schuhmeister, who is devoting her entire time to the laboratory work of the State Board of Health. We are thus able to make prompt and accurate reports on all bacteriological questions submitted to us, so far as our laboratory is equipped to make such examinations.

We have stated that the laboratory is the heart of the public health work. It is also an economic investment on the part of the people of the state. This year the small investment now made in this laboratory is bringing good returns and the investment should be increased proportionately and proportionately greater returns secured. I submit herewith a paper read by Dr. E. P. Fick at the meeting of Health Officers in July, 1916.

THE STATE LABORATORY AS AN ECONOMIC MEASURE.**By Edward P. Flick, M. D., Consulting Bacteriologist.**

It has been said that the American nation is a people of forgetters, and it might not seem out of place here to remind you health officers of a few incidents in the brief life history of the public health movement.

This propaganda has been and is one of the most rapidly moving sciences in man's activity. In this state, about eight years ago, there were a couple of small rooms in a third-class building, and in one corner of these was a cubby-hole jammed with obsolete equipment, to a great extent borrowed, loaned and given to the state laboratory for conducting a few experiments and examinations. Occasional cultures coming in from the doctors in the country, such as sputum, specimens for the determination of diphtheria, and a rare genococcus slide were about the extent of the work done. I would say twenty or thirty of such examinations per month would not be far from the actual total, and there was, and has been until a comparatively few months ago, a part time bacteriologist. Few of the thousands of physicians who send specimens to the public diagnostic laboratories and depend upon this valuable assistance as one of the fundamentals of their daily routine, realize how this service has grown from the small beginning a few years ago, and fewer still realize, as Winslow has said, that "The work of the laboratories is one of the chief foundations upon which all sound public health work must be based;" and still, only Massachusetts and New York appropriate respectable sums for such research.

I trust that I shall not digress too far from my subject to recount in a brief sort of way the illuminating history of the public health laboratory. It began its modern form about the time of our own Civil War, with the epoch making discoveries of Louis Pasteur, Lord Lister and Robert Koch, but the public health laboratory antedates even bacteriology. In America, interest in public health matters began three or four years after the war, during the period of reconstruction. It began technically in Massachusetts, when the State Board of Health was established for the purpose of looking into the stream pollution of that state. William T. Sedgwick, late president of the American Public Health Association, shortly afterwards enriched this board, and when the new science of bacteriology came into being in the early eighties he was quick to see its possibilities. It may be of interest for you to know that Dr. Samuel J. Holmes, practicing physician of this city at the present time, went to Europe to learn about this new-fangled mystery of germs, and taught this subject in Chicago soon afterwards. Further, that Dr. Kibbe, of Seattle, who died about ten years ago, was considered a sort of he-witch because he snooped around in dark corners with a lamp, gazing through a microscope at "those things." Sedgwick gave the first course in bacteriology in this country, as far as I can learn, and that was as recent as some twenty-

six years ago in the famous Boston "Tech." Surely, "the world do move!" It may be that some of us here took the first courses in bacteriology that were ever given in America. The early work was largely devoted to sanitary rather than to the medical aspects of the subject, but it became increasingly apparent that there were rich promises in the control of communicable diseases. Especially was this clear to our now foremost living sanitarian, Herman Biggs, even then at the port of New York. Gradually, departments grew in the various health boards, with bacteriology always leaping to the front. Cholera, at the time of the World's Fair in Chicago, threatened us from Europe, and the methods of the discoverer of the organism of cholera were quickly taken advantage of by us here. Then the boards incorporated in the service the examination of sputum for tuberculosis; then Dr. Parks, in New York as a private research, began to examine the throats of the well and the sick for diphtheria, and it was found advisable to include this work in public health laboratories. That was twenty years ago. Now he examines close to 100,000 specimens for diphtheria a year, and it may be of further interest to you to know that the New York board about that time began a free distribution of diphtheria antitoxin. So, gradually, we have seen the more common infectious diseases come one by one into the fold of the laboratory.

If one scans the pages of man's activities, yes, even the prowess of the gods, from the building of the Panama Canal to the cleaning of the Augean stables, nothing as I see it can compare with the simple endeavors of the laboratory worker, whose purpose seems only to prolong life. It is difficult to put a monetary value on the human life; it is difficult to estimate what it costs in dollars to the state to lose a citizen; and yet, how cheaply do its citizens pay, how begrudgingly do the hands close upon the few shekels for the Great Healer. New Mexico has no state laboratory! It does not take much of a prophetic eye to realize what the future of this great movement has in store for us. Even now the various state laboratories examine specimens for syphilis, cancer, make vaccines for rabies, tuberculosis, smallpox and typhoid, (Washington was the second state to do this), determine the purity of drugs and foods, and undertake special investigations, technical studies and research.

I have no figures available as to the money Washington expends on its laboratory, but it is well within reason to say that with its one odd million souls it contributes less than one-hundredth of a cent. It does seem that from one to two cents per capita is not asking too much. This sum is necessary to insure efficient laboratory service. It must be remembered, to paraphrase Winslow, that a public health official applies his lessons learned in the laboratory to the health of the community at large.

Dr. Chapin, who was out here a few years ago investigating public health matters, said: "It is fortunate that the nation consists of forty-eight commonwealths in which forty-eight different serial experiments

can be tried." For Washington state I would propose an experiment, having in view the establishment of a public health laboratory, or laboratories, under the control of the State Board of Health, and having full charge of the analysis of foods and drugs, a medical diagnostic division for physicians, not only for the examination of the ordinary specimens, but for the diagnosis of syphilis, tissues, etc., and the manufacture of biologics. Parenthetically, let me say that the position that the syphilitic occupies in the country, and therefore in the State of Washington, is almost incomprehensible. There is probably more written about this disease than any other with the exception of cancer and tuberculosis. We realize its importance, but in most places we do nothing for it. Our state, city and county institutions are reeking with this plague; especially is this true in our insane asylums. Every inmate should be, and is not, examined for it. That public supervision of irresponsible syphilitics in any stage of the disease is needed, is a position fortunately no longer under discussion. I hesitate to estimate the heavy toll Washington pays for riding in such leuetic livery. Estimates of the number of syphilitics in our public institutions have not been compiled, but it is probably fair to assume that the number is approximately the same in this state as in others where such statistics have been gathered. I have to thank Dr. Eugene R. Kelley, late secretary of the Washington State Board of Health, and now Chief of the Division of Communicable Diseases in the state of Massachusetts for the following report entitled, "Clinical and Wasserman Analysis of 4,223 cases." These consisted of psychopathic subjects, inebriates, feeble-mindedness, delinquent subjects, criminals, tuberculosis individuals, patients suffering from malignant diseases, acute general hospital group, pregnancy group, infants and children, and the chronic disease group chiefly of the alms house type. Interestingly enough the criminal subjects consisting of 185, were 40 per cent syphilitic. About five per cent doubtful, and the balance presumably not syphilitic. The alms house type consisted of 26 per cent syphilitic, infants and children 18½ per cent, the psychopathic group nearly 15 per cent syphilitic, and the acute general hospital group nearly 13 per cent syphilitic. Of the entire number 15 per cent were found to be tainted with leuetic infection and suffering more or less severely with that disease.

Just a scanning of this report only serves to direct your attention to the importance of an attempt to control this disease in Washington. The consistent thing, of course, would be the detection of the disease in its incipency, in order to keep this group out of our public institutions where the cost of maintaining such people is such a drain on the tax-payers. I believe it is just as absurd to not have the State Board of Health in control of the state asylums and hospitals, as far as the health of the inmates is concerned, as it would be not to have a medical man as a health officer.

By a strange turn of the wheel, the laboratory of the State Board of Health has never had anything to do with pure foods or drugs.

Instead, the work uneasily lies in the Department of Agriculture. Why, indeed! There is decidedly too much overlapping of our own community interest in human health. It is not economical.

Finally, I am convinced that the time is coming when, except in the most rural communities, it will be required of you to be especially trained in health matters. Probably you will have the title of Doctors of Public Health.

The functions of a complete public health laboratory are far reaching. We have no records in this state showing what per cent of the inmates of our asylums are there as a result of syphilis, but Massachusetts has made a very careful study of this question and she finds that 15 per cent of the inmates of her insane asylums are there because the diagnosis of syphilis was not made at a sufficiently early date. It is, of course, highly important that this diagnosis be made after the patient is admitted to the asylum, for without such diagnosis proper treatment cannot be administered, but after this disease has advanced to such a stage that insanity is produced, little or no results can be secured by treatment. In other words, were this diagnosis made early in the course of the disease and proper treatment administered, these unfortunates would not be charges upon the state and without hope of improvement. Not only would the early diagnosis and proper treatment keep 15 per cent of the inmates out of the insane asylums, but every poor farm, free county hospital, and every charitable institution in this and other states, have a large proportion of their inmates on account of failure to recognize this disease in its incipency.

Thanks to laboratory workers, the diagnosis of syphilis can be positively made today at any stage of the disease, by what is known as the Wasserman test. This is strictly a laboratory test and can be made only by experienced workers in laboratories. The county physician and the physician in private practice does not feel that he can expend from his own pocket the sum of \$5.00 or \$10.00 in order to have this test made for patients from whom he will receive no remuneration. The result is that these cases go undiagnosed and unrecognized, to the end that they become charges upon the people. Your public health

laboratory should be equipped to make the Wasserman test for every citizen of the state desiring such test.

PATHOLOGICAL TESTS.

Not only should the public health laboratory be equipped to make all bacteriological examinations free of charge to the people of the state, but it should also be equipped to make pathological examinations; that is, to examine and determine the character of tumors and other disease tissues. The same economic consideration holds good with regard to these conditions as with regard to syphilitic conditions. Poor people unable to pay for examinations made at commercial laboratories do not receive this benefit. These tumors are permitted to progress beyond the stage where surgery will afford relief before a diagnosis is made. The result is these people become permanent charges on our cities, counties and state.

Further, the State Board of Health laboratory should be prepared to tell any citizen in the state whether the food products sold to him are of proper standard, and not only the food products sold, but the natural food of the infant—the mother's milk—often requires laboratory examination to determine its nourishing quality.

The whole question of a properly equipped laboratory, and one so equipped that it will meet every requirement confronted in the protection of the health of the people of the state is an economic one and a profit bearing investment. The work performed by the state laboratory with its meagre equipment during the last biennium, is submitted in Tables IX and X.

We respectfully request that you note the large amount of typhoid bacterin dispensed by this laboratory. All typhoid bacterin made in our laboratory is tested by the United States Public Health Service, both as to its purity and efficiency before it is dispensed. Every soldier going from Washington in our National Guard, received immunizing doses of bacterin prepared in your state public health laboratory. Sufficient typhoid bacterin has been used to immunize 8,959 persons during the last biennium. None is required to receive this pro-

phylactic measure against typhoid fever. We simply submit to the people the evidence of its efficiency. We supply the material free of charge to the physicians of the state. Those who desire to be immunized apply to their family physician for immunization, and the inclination on the part of our people to take advantage of this modern prophylactic against typhoid fever is evidenced by the increasing calls that come to us for the material.

RABIES.

Rabies has not prevailed in our state to as great an extent during the last biennium as it did during the previous biennium, but it is liable to break out at any time. During the last month rabid coyotes have appeared in the eastern part of our state. Infected coyotes were found last year in Oregon, Idaho, California and other adjacent states. We cannot keep this disease out of our state. Therefore, we must prepare to fight it.

The United States Public Health Service supplies our laboratory with the material for administering the Pasteur treatment. After rabies has developed in a human being, no treatment is known that will cure it, but if the Pasteur treatment is administered within a reasonable time after a person is bitten by a rabid animal, the disease is prevented. The material for this is furnished the State Board of Health by the Federal Government on condition that it be administered by the laboratory workers of this department. It is therefore necessary for those bitten by rabid animals to come to Seattle to receive the treatment, for which no charge is made, either for material or for its administration. During the last biennium in all 48 people received this treatment, but we must be prepared to administer it to increasing numbers as the disease becomes more prevalent in our state.

GOITER.

Goiter prevails to a very unusual extent in Washington. The cause of this disease is not known. It seriously handicaps many of our citizens and incapacitates and claims the lives of others. An intensive study into the cause and possible prevention of this disease should be undertaken in our state public health laboratory.

Table IX.—SPECIMENS EXAMINED IN LABORATORY—Continued.

FROM OCTOBER 1, 1915, TO OCTOBER 1, 1916.

MONTH	Throat Cultures					Typhoid					Gonorrhea					Rabies					Urine				
	Positive.....	Negative.....	Suspicious.....	Not Reported..	Total.....	Positive.....	Negative.....	Suspicious.....	Not Reported..	Total.....	Positive.....	Negative.....	Suspicious.....	Not Reported..	Total.....	Positive.....	Negative.....	Suspicious.....	Not Reported..	Total.....	Positive.....	Negative.....	Suspicious.....	Not Reported..	Total.....
1915																									
October	6	13	.....	.....	19	1	17	.....	.....	18	6	7	13	.....	26	6	7	.....	.....	.....	.....	.....	.....	.....	.....
November	10	16	.....	.....	26	2	6	.....	.....	8	12	2	3	.....	17	12	2	.....	.....	.....	.....	.....	.....	.....	.....
December	70	456	.....	.....	526	5	12	.....	.....	17	14	6	6	.....	26	14	6	.....	.....	.....	.....	.....	.....	.....	.....
1916																									
January	12	114	.....	.....	126	6	30	.....	.....	36	11	8	3	.....	22	11	8	.....	.....	.....	.....	.....	.....	.....	.....
February	11	82	.....	.....	93	10	81	.....	.....	41	6	7	7	.....	20	6	7	.....	.....	.....	.....	.....	.....	.....	.....
March	4	53	.....	.....	57	7	33	.....	.....	40	10	12	11	.....	33	10	12	.....	.....	.....	.....	.....	.....	.....	.....
April	3	34	.....	.....	37	8	33	.....	.....	41	6	14	12	.....	32	6	14	.....	.....	.....	.....	.....	.....	.....	.....
May	4	26	.....	.....	30	5	39	.....	.....	44	2	21	7	.....	30	2	21	.....	.....	.....	.....	.....	.....	.....	.....
June	4	11	.....	.....	15	4	25	.....	.....	29	8	12	3	.....	18	8	12	.....	.....	.....	.....	.....	.....	.....	.....
July	2	13	.....	.....	15	4	21	.....	.....	25	5	16	1	.....	22	5	16	.....	.....	.....	.....	.....	.....	.....	.....
August .....	.....	57	.....	.....	57	3	20	.....	.....	23	6	26	2	.....	47	6	26	.....	.....	.....	.....	.....	.....	.....	.....
September	4	7	.....	2	13	4	15	.....	1	20	10	23	1	.....	45	10	23	.....	.....	.....	.....	.....	.....	.....	.....
Totals.....	130	882	.....	2	1,014	59	232	.....	1	342	97	54	69	1	348	97	54	69	1	348	10	12	.....	.....	22

* Thirteen examinations for para typhoid (1—12).

† Twenty examinations for para typhoid (3—17).

Table IX.—SPECIMENS EXAMINED IN LABORATORY—Continued.
FROM OCTOBER 1, 1915, TO OCTOBER 1, 1916.

MONTH	Typhoid Carrier					Miscellaneous					Preparation of Antogen. Vacc.					Water					Milk							
	Positive.....	Negative.....	Suspicious.....	Not Reported..	Total.....	Positive.....	Negative.....	Suspicious.....	Not Reported..	Total.....	Staphyl.....	Strept.....	Other.....	Organic.....	Total.....	Contaminated.	Not Contami- nated.....	Suspicious.....	Not Reported..	Total.....	Positive.....	Negative.....	Suspicious.....	Not Reported..	Total.....	Grand Totals..	Grand Totals..	Bact. Counts..
1915																												
October .....	.....	.....	.....	.....	.....	1	1	.....	.....	2	1	.....	.....	.....	1	16	128	13	.....	157	.....	.....	.....	.....	.....	.....	.....	21
November .....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	2	1	.....	.....	3	19	74	9	.....	112	.....	.....	.....	.....	.....	.....	.....	41
December .....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....	2	50	2	.....	54	.....	.....	.....	.....	.....	.....	.....	7
1916																												
January .....	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	2	.....	17	.....	.....	17	.....	.....	.....	.....	.....	.....	.....	10
February .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	24	.....	.....	24	.....	.....	.....	.....	.....	.....	.....	.....
March	1	1	.....	.....	.....	.....	2	.....	.....	4	.....	.....	.....	.....	.....	6	66	5	.....	77	.....	.....	.....	.....	.....	.....	.....	.....
April .....	.....	.....	.....	.....	.....	.....	2	.....	.....	4	1	.....	.....	.....	1	1	49	3	.....	53	.....	.....	.....	.....	.....	.....	.....	.....
May	1	12	.....	.....	.....	.....	1	.....	.....	2	2	.....	.....	.....	2	4	36	1	.....	41	.....	.....	.....	.....	.....	.....	.....	.....
June .....	.....	5	.....	.....	.....	.....	1	.....	.....	3	.....	.....	.....	.....	.....	5	41	5	.....	51	.....	.....	.....	.....	.....	.....	.....	.....
July .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	1	1	.....	.....	2	2	27	4	.....	33	.....	.....	.....	.....	.....	.....	.....	.....
August .....	.....	.....	.....	.....	.....	.....	2	.....	.....	6	2	.....	.....	.....	2	8	39	.....	.....	55	.....	.....	.....	.....	.....	.....	.....	6
September	1	2	.....	.....	.....	.....	2	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	102	.....	.....	.....	.....	.....	.....	.....	8
Totals.....	3	29	.....	.....	32	15	12	.....	.....	27	11	2	.....	.....	13	.....	.....	.....	.....	776	.....	.....	.....	.....	.....	.....	.....	93

Table IX.—SPECIMENS EXAMINED IN LABORATORY—Continued.

FROM OCTOBER 1, 1915, TO OCTOBER 1, 1916.

MONTH	Throat Cultures					Typhoid					Gonorrhea					Rabies					Urine				
	Positive.....	Negative.....	Suspicious.....	Not Reported..	Total.....	Positive.....	Negative.....	Suspicious.....	Not Reported..	Total.....	Positive.....	Negative.....	Suspicious.....	Not Reported..	Total.....	Positive.....	Negative.....	Suspicious.....	Not Reported..	Total.....	Positive.....	Negative.....	Suspicious.....	Not Reported..	Total.....
1915																									
October	6	13	.....	.....	19	1	17	.....	.....	18	6	7	13	.....	26	6	7	.....	.....	.....	.....	.....	.....	.....	.....
November	10	16	.....	.....	26	2	6	.....	.....	8	12	2	3	.....	17	12	2	.....	.....	.....	.....	.....	.....	.....	.....
December	70	456	.....	.....	526	5	12	.....	.....	17	14	6	6	.....	26	14	6	.....	.....	.....	.....	.....	.....	.....	.....
1916																									
January	12	114	.....	.....	126	6	30	.....	.....	36	11	8	3	.....	22	11	8	.....	.....	.....	.....	.....	.....	.....	.....
February	11	82	.....	.....	93	10	31	.....	.....	41	6	7	7	.....	20	6	7	.....	.....	.....	.....	.....	.....	.....	.....
March	4	53	.....	.....	57	7	33	.....	.....	40	10	12	11	.....	33	10	12	.....	.....	.....	.....	.....	.....	.....	.....
April	3	34	.....	.....	37	8	33	.....	.....	41	6	14	12	.....	32	6	14	.....	.....	.....	.....	.....	.....	.....	.....
May	4	26	.....	.....	30	5	39	.....	.....	44	2	21	7	.....	30	2	21	.....	.....	.....	.....	.....	.....	.....	.....
June	4	11	.....	.....	15	4	25	.....	.....	29	3	12	3	.....	18	3	12	.....	.....	.....	.....	.....	.....	.....	.....
July	2	13	.....	.....	15	4	21	.....	.....	25	5	16	1	.....	22	5	16	.....	.....	.....	.....	.....	.....	.....	.....
August .....	.....	57	.....	.....	57	3	20	.....	.....	23	6	26	2	.....	*47	6	26	.....	.....	.....	.....	.....	.....	.....	.....
September	4	7	.....	.....	13	4	15	.....	.....	20	10	23	1	.....	†55	10	23	.....	.....	.....	.....	.....	.....	.....	.....
Totals.....	130	862	.....	2	1,014	59	282	.....	1	342	97	54	69	1	348	17	23	.....	.....	.....	10	12	.....	.....	22

* Thirteen examinations for para typhoid (1—12).

† Twenty examinations for para typhoid (8—17).

Table IX.—SPECIMENS EXAMINED IN LABORATORY—Continued.
FROM OCTOBER 1, 1915, TO OCTOBER 1, 1916.

MONTH	Typhoid Carrier					Miscellaneous					Preparation of Antogen. Vacc.					Water					Milk							
	Positive.....	Negative.....	Suspicious.....	Not Reported..	Total.....	Positive.....	Negative.....	Suspicious.....	Not Reported..	Total.....	Staphyl.....	Strept.....	Other.....	Organic.....	Total.....	Contaminated.	Not Contami- nated.....	Suspicious.....	Not Reported..	Total.....	Positive.....	Negative.....	Suspicious.....	Not Reported..	Total.....	Grand Totals..	Grand Totals..	Bact. Counts..
1915																												
October .....	.....	.....	.....	.....	.....	1	1	.....	.....	2	1	.....	.....	.....	1	16	128	13	.....	157	.....	.....	.....	.....	.....	.....	.....	21
November .....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	2	1	.....	.....	3	19	74	9	.....	112	.....	.....	.....	.....	.....	.....	.....	41
December .....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....	2	50	2	.....	54	.....	.....	.....	.....	.....	.....	.....	7
1916																												
January .....	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	2	.....	17	.....	.....	17	.....	.....	.....	.....	.....	.....	.....	10
February .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	24	.....	.....	24	.....	.....	.....	.....	.....	.....	.....	.....
March	1	1	.....	.....	.....	.....	2	.....	.....	4	.....	.....	.....	.....	.....	6	66	5	.....	77	.....	.....	.....	.....	.....	.....	.....	.....
April .....	.....	.....	.....	.....	.....	.....	2	.....	.....	4	1	.....	.....	.....	1	1	49	3	.....	53	.....	.....	.....	.....	.....	.....	.....	.....
May	1	12	.....	.....	.....	.....	1	.....	.....	2	2	.....	.....	.....	2	4	36	1	.....	41	.....	.....	.....	.....	.....	.....	.....	.....
June .....	.....	5	.....	.....	.....	.....	1	.....	.....	3	.....	.....	.....	.....	.....	5	41	5	.....	51	.....	.....	.....	.....	.....	.....	.....	.....
July .....	.....	.....	.....	.....	.....	.....	2	.....	.....	2	1	1	.....	.....	2	2	27	4	.....	33	.....	.....	.....	.....	.....	.....	.....	.....
August .....	.....	.....	.....	.....	.....	.....	2	.....	.....	6	2	.....	.....	.....	2	8	39	.....	.....	55	.....	.....	.....	.....	.....	.....	.....	6
September	1	2	.....	.....	.....	.....	2	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	102	.....	.....	.....	.....	.....	.....	.....	8
Totals.....	3	29	.....	.....	32	15	12	.....	.....	27	11	2	.....	.....	13	.....	.....	.....	.....	776	.....	.....	.....	.....	.....	.....	.....	93

Table X.
TYPHOID BACTERIN DISPENSED.

	CC	Treat-ments
1914		
October	490	192
November	290	112
December	805	322
1915		
January	180	72
February		
March	300	120
April	252	101
May	206	82
June	510	204
July	885	354
August	1,437	575
September	348	139
Totals.....	5,683	2,273
1915		
October	750	300
November	60	24
December	277.5	111
1916		
January	472.5	189
February	2,620	1,049
March	1,795	718
April	2,300	920
May	880	352
June	4,415	1,766
July	2,225	890
August	602.5	241
September	317.5	127
Totals.....	16,715	6,686

RABIES—FREE TREATMENTS FURNISHED.

October, 1914 to 1915.....	42 treatments
October, 1915 to 1916.....	7 treatments

REPORT ON VITAL STATISTICS.

This branch of the work constitutes the book-keeping of Public Health efforts. Without proper registration of births and deaths it is impossible to know what the results of Public Health work may be.

The work performed in this department is little appreciated by those who have not had experience in public health matters, and especially in the vital statistics line of this work. We are now recording each month about 2,200 births and 1,050 deaths. To simply say that we are recording this number per month gives no idea of the amount of work that is done. In regard to the death certificates, let me state the procedure that is gone through with regard to each certificate.

Upon receipt of a report from the local registrar, each death certificate is checked to see that it is properly made out and is complete so far as it may be possible to secure the information required. The registrar is then credited with the number of deaths recorded by him. Each death certificate is then gone over to see if cause of death as given on the death certificate is a proper and legitimate cause of death. In about 10 per cent of the certificates filed the death certificate is not properly made out, thus requiring the writing of about 100 letters per month in order to complete the death certificate. Each certificate is then gone over again and cause of death properly tabulated, as indicated in Tables XI and XII of this report. The deaths are then numbered in consecutive order. They are then indexed and cross-indexed by card filing system, so that any death certificate filed in this office may be promptly located. Thus each death certificate is handled not less than six times in this department before it is filed as complete. After the death certificates have been filed the newspapers of the state are studied and individual reports from undertakers are received and checked, in an effort to make sure that every death that occurs in this state is properly recorded.

The same procedure is gone through each month with regard to births filed. The same proportion of birth certificates are found to be incomplete or inaccurate, and letters are written for additional information. The same efforts to check up the birth returns are made, as stated above to check up the death returns. And, finally, a pamphlet, intended to instruct the mother in the care of the baby, is sent to the parent of every child whose birth is recorded. Each quarter a statement must be made to the county, setting forth the number of births and deaths properly recorded by each local registrar in the state. There are 357 local registrars. This alone is equivalent to keeping a set of books for a store with 357 credit customers. The department must see that each local registrar is supplied with the necessary blanks for securing the proper returns, and must at all times see that each local registrar not only understands the duties of his office, but that he performs the work required of him.

In performing the duties required by the State Board of Health under the vital statistics law, a very large amount of clerical work must be performed, a work that is accomplished by the present office force only by virtue of the fact that these employees not only put their heart in the work, but they have by experience become so skillful in handling this large mass of material that they are able to accomplish as much as could be accomplished by twice the number of employees inexperienced in this line of work. We, therefore, believe that these employees are entitled to a raise in salary on account of their increased efficiency.

For a number of years the death returns in the State of Washington, upon which our low death rate is based, have been questioned by sanitarians and statisticians of the older states. Not only have they been questioned in various meetings, but our death returns have been officially questioned by the United States Census Bureau, said Bureau assuming that we were not getting complete returns. This controversy has been carried on by correspondence between this department and the Census Bureau and

a mass of written material has accumulated. Believing that little or nothing was accomplished by such correspondence and that the question of the completeness of our returns could be determined only by a thorough investigation, the Commissioner of Health insisted that the United States Census Bureau send a competent man to Washington to investigate the work of this department relative to the registration of deaths. This was done in the spring of 1916, when Dr. Cressy L. Wilbur came to our state on behalf of the United States Census Bureau, and, as a result of his investigation, reported that our death returns were, to say the least, reasonably complete. As a matter of fact, I am thoroughly convinced that Dr. Wilbur failed to find a single death in the State of Washington that had not been properly recorded, with the exception of a very small proportion of the deaths that had occurred on Indian Reservations and other Federal Reservations in the state, and as our authority does not extend to these reservations, we believe that if there is any incompleteness in our death returns the fault is to be laid entirely at the door of the Federal Department. As a result of the investigation made by Dr. Wilbur, on behalf of the United States Census Bureau, the authenticity of Washington's low death rate cannot be officially questioned. However, it goes against the grain for many of the older states to grant our low death rate, and now they raise the question as to our estimated population. We have nothing to do with the population estimate. This is entirely in the hands of the Census Bureau, and if they have over estimated our population it is their fault and not ours. But we doubt, and seriously doubt, if the population is as badly over estimated as is assumed by some. We think that there is a slight over estimate, but nothing in proportion to the under estimate that was made for this state in 1907, 1908 and 1909.

I regret exceedingly that we have not the authority to publish Dr. Wilbur's report to the United States Census Bureau, a copy of his report having been supplied me with the absolute agreement that it was not for publication. However, a study of

deaths among the policy holders of the Metropolitan Life Insurance Company was made, at the request of the Commissioner, by Mr. Louis I. Dublin, a statistician whose ability to make competent investigations and draw logical conclusions is unquestioned. It is with great pleasure that I submit herewith Mr. Dublin's report with regard to deaths among industrial insurance policy holders in the State of Washington. You will note that his findings show a death rate of 6.6 per thousand for the State of Washington, against a death rate of 10.8 for the average among policy holders.

MORTALITY OF THE INDUSTRIAL POPULATION OF WASHINGTON.

**By Mr. Louis I. Dublin, Statistician, Metropolitan Life Insurance Company,
New York, September 8th, 1916.**

The general death rate of the State of Washington is low; in the year 1913, when the rate for the whole registration area was 14.1 per thousand, the Washington rate was only 8.5. General confirmation of the healthfulness of the state is furnished by another group of figures. These are the returns of the industrial insurance companies operating in Washington. The Metropolitan Life Insurance Company, for example, had about 55,000 policies in force in Washington in its industrial department alone in the year 1915. This exposure may be considered a fair sample of the general population of the state, including as it does a fair proportion of the working class families. The death rate for this group was 7.8 per thousand in 1915.

If, in order to broaden the Metropolitan exposure, we extend the experience over the three-year period, 1913 to 1915, we find a rate of 6.6 per thousand among the policyholders. This rate is considerably lower than the general rate of the company for white lives, which in the corresponding period was 10.8 per thousand. Thus the favorable population returns are confirmed. The insurance death rate is extremely low because children under one are not included in the experience. This exclusion easily accounts for at least two points in the general death rate. The two rates, namely for the population and for the insured are, therefore, much the same. This condition is also found in the rates for the principal causes of death. (See table). It is interesting to analyze the figures therein given to determine which causes of death are especially responsible for the low rates found in Washington.

The typhoid fever rates are very low in both groups—only 5.8 per hundred thousand for the insured and 11.3 for the general population. The latter rate was unduly weighted by the *Centralia* epidemic of 1913. This was the first serious epidemic which the state had ex-

perienced and served to impress the necessity for strict supervision of water supplies. As a result, we may expect even lower typhoid rates for subsequent years.

The infectious diseases of children are about equally represented in both experiences, though scarlet fever and whooping cough have lower rates for the insured than for the population. As compared with the rest of the country, we find that the scarlet fever and diphtheria rates are only a little over 20 per cent, measles 37 per cent, and whooping cough 66 per cent of the corresponding rates for the registration area. Similarly, the population rate for tuberculosis of the lungs is 61 per cent of that for the registration area, while the insured rate is only 41 per cent of the rate for the country-wide experience of the company.

Cancer also has low rates in both groups, though the rate for the population is decidedly higher than that for the insured—53.3 per hundred thousand as compared with 41.7; the rate for the registration area is 78.9 per hundred thousand. Contrary to most experiences, the organic diseases of the heart are more highly represented among the industrially insured than in the population at large, and they form the most important single cause of death throughout the state. The rate of 95.9 per hundred thousand for the insured and 82.4 for the population are, nevertheless, much lower than those found in the general experience of the company and in the registration area, both of which are nearly 140 per hundred thousand.

The diseases of the respiratory system have a low representation in both experiences, the rate being about one-third as high as those found throughout the country. The mortality from the puerperal state is greater among the insured women, but in neither experience do the rates show striking deviations from the normal. The external causes are much more highly represented in the general population than in the insured group. This is surprising in view of the fact that insured working people are more frequently exposed to accidents and other hazards which often result in violent death and usually show higher death rates from these causes. The Washington rate is, however, practically identical with that of the registration area.

The mortality among the wage earning classes of the country has long been a matter of great interest to the executives of the Metropolitan Life Insurance Company and they have in recent years inaugurated a campaign of education against the preventable diseases and have instituted a system of visiting nursing of sick policyholders. It has been demonstrated that this applied preventative work has resulted in lowering the industrial death rate very appreciably in the last three years. Such results as this give great encouragement to the further extension and development of life conservation work on the part of the company, and it is hoped that its effort in conjunction with that of the health departments of the country will ultimately bring about a reduction in the general death rate to the low level which the State of Washington has shown it is possible to attain.

We must not, however, feel too proud or too confident as a result of this low death rate. Our death rate is not so much lower than that found in other Rocky Mountain and Pacific Coast states, with the exception of California, whose high death rate is accounted for by her large immigration of tubercular subjects.

Mr. Dublin stated to me in August of last year that he could take our death records and state within a reasonable time just what year our death rate will reach 14 per thousand population. His study, however, would necessarily assume that the people of Washington are going to continue the same amount of public health work that they are performing now. It is, however, within the power of the people of Washington to entirely upset statisticians' predictions by so thoroughly and energetically persisting in their public health work, that our death rate will never reach 14 per thousand population. With our sparsely settled country, our pure water supplies, our intelligent people, and our climatic condition, I hold that when the death rate in any state on the Pacific Coast reaches 10 per thousand, and where there are not extenuating circumstances, such as exist in California, that such state is entitled to condemnation for failure to perform proper public health work, instead of praise for keeping their death rate below 10 per thousand.

Table XI.—CLASSIFICATION OF DEATHS, 1914.

[illegible]

BIRTHS.

With regard to the registration of births, we cannot claim to have complete returns. While the returns of births have materially increased during the last four years, the birth rate per thousand population in 1912 being 15.2, whereas, in 1915 it is 16.8, using the Census Bureau's report of estimated population. With this increase in births recorded per thousand population, a peculiar condition is confronted in the fact that the births recorded per thousand population in the city of Seattle have shown a constant decrease. We should show a birth rate of 20 to 25 per thousand population. We are, therefore, still considerably short in the matter of complete registration of births. One reason for this is our lack of any law controlling the practice of midwifery. The physicians of the state are making fairly complete returns of all births attended by them. A few seem obdurate in this matter. We have collected a large mass of evidence relative to those who have not reported their births completely. In a large majority of instances, letters written to physicians calling their attention to failure to make these reports have brought prompt results. In only two instances has it been deemed advisable to go into court in these cases. But as time progresses and those responsible for making birth reports have sufficient opportunity to become thoroughly acquainted with the requirements of the law, patience will cease to be a virtue. It will then be necessary to take legal action in the matter of violating the laws relative to the registration of births with as little hesitancy as action is taken with regard to the violation of other laws.

The birth record of a child is a valuable asset to him in later life and we have no right to steal this asset from him. During the last year our department has been flooded with requests for certificates of birth of young men and young women who have gone to other countries and found themselves embarrassed by lack of evidence of American citizenship. In many cases a birth certificate was required to complete this evidence. Unfortunately, most of these people were born before the registration of

births was required in the State of Washington, and many of them have been placed in embarrassing, if not humiliating, positions because of their inability to secure this record, which one county attorney informed us "Was a very insignificant matter."

In addition to requiring birth certificates for legal questions, we have of late received numerous letters relative to profit-sharing industries, stating that in order to participate in the profits, the age of the employee must be known, and that nothing but a birth certificate will be accepted as evidence of age.

The lack of laws controlling midwifery in our state prevents our having any knowledge of who is practicing midwifery, and without such knowledge we cannot inform them relative to the requirements of the laws pertaining to the registration of births. But even with these handicaps, the completeness of birth registration is gradually increasing in our state and we hope shortly to be able to confidently assert that our births are as completely recorded as our deaths.

Table XIII.—CLASSIFICATION OF BIRTHS, 1914.

COUNTIES	SEX		COLOR					NATIVITY OF FATHER			NATIVITY OF MOTHER			Total
	Male	Female	White	Black	Jap. or Chinese	Indian	Mixed or Others	Native	Foreign	Not Reported	Native	Foreign	Not Reported	
Adams	108	82	184	1	.....	.....	.....	135	49	1	149	87	.....	185
Asotin	66	55	121	.....	.....	.....	.....	115	6	.....	114	7	.....	121
Benton	99	76	178	.....	.....	1	.....	143	28	3	147	27	.....	174
Chehalis	386	381	762	1	1	.....	2	466	294	6	508	259	4	766
Chelan	206	203	404	.....	3	.....	.....	359	49	1	375	34	.....	409
Clallam	86	103	184	.....	1	2	.....	136	49	3	142	43	3	188
Clarke	271	250	521	.....	.....	1	2	406	109	6	451	68	2	521
Columbia	81	75	156	.....	.....	.....	.....	143	10	3	147	9	.....	156
Cowlitz	113	115	228	.....	.....	.....	.....	187	39	2	197	29	2	228
Douglas	106	100	204	1	1	.....	.....	179	27	.....	189	17	.....	206
Ferry	43	37	70	.....	1	2	7	62	17	1	66	14	.....	80
Franklin	44	52	92	.....	4	.....	.....	79	17	.....	81	15	.....	96
Garfield	62	37	99	.....	.....	.....	.....	94	5	.....	98	6	.....	99
Grant	73	68	141	.....	.....	.....	.....	106	35	.....	113	23	.....	141
Island	51	53	101	.....	1	.....	1	60	42	1	71	31	1	103
Jefferson	57	62	109	.....	6	3	1	73	39	2	85	34	.....	119
King	579	535	1,007	5	101	1	.....	559	554	1	645	466	3	1,114
Kitsap	175	168	823	.....	19	.....	1	192	148	3	214	123	1	343
Kittitas	192	159	349	2	.....	.....	.....	179	172	.....	199	150	2	351
Klickitat	77	81	157	.....	.....	.....	.....	142	16	.....	146	11	1	158
Lewis	362	330	698	.....	4	.....	1	547	143	3	599	129	.....	698
Lincoln	196	162	358	.....	1	.....	1	270	85	5	297	62	1	360
Mason	34	31	63	.....	1	1	.....	46	17	2	48	17	.....	65
Okanogan	109	102	210	.....	.....	.....	1	189	19	3	186	22	3	211
Pacific	170	173	345	.....	2	1	.....	221	124	3	247	101	.....	348
Pend Oreille	43	39	82	.....	.....	.....	.....	70	9	3	74	6	2	82
Pierce	362	283	606	2	34	.....	3	380	258	7	419	223	3	645
San Juan	33	41	77	.....	1	.....	1	64	15	.....	67	12	.....	79
Skagit	322	315	628	.....	8	.....	1	466	168	3	492	142	3	637
Skamania	13	22	35	.....	.....	.....	.....	22	13	.....	29	5	1	35
Snohomish	344	293	633	.....	3	.....	4	423	209	3	464	155	1	640

Table XIV.—CLASSIFICATION OF BIRTHS, 1915.

COUNTIES	SEX		COLOR					NATIVITY OF FATHER			NATIVITY OF MOTHER			Total
	Male	Female	White	Black	Jap. or Chinese	Indian	Mixed or Others	Native	Foreign	Not Re-ported	Native	Foreign	Not Re-ported	
Adams	101	80	181	.....	.....	.....	.....	133	47	1	181	50	.....	181
Asotin	66	56	119	.....	.....	.....	.....	108	7	4	115	4	.....	119
Benton	90	88	177	.....	1	.....	.....	155	22	1	148	29	1	178
Grays Harbor	371	382	701	.....	.....	1	1	456	242	5	488	212	3	708
Chelan	218	168	371	1	3	1	.....	339	37	.....	338	37	1	376
Clallam	112	109	211	.....	1	6	3	171	48	2	182	39	.....	221
Clarke	268	227	489	.....	.....	.....	1	388	101	6	399	82	9	490
Columbia	89	80	168	.....	1	.....	.....	156	13	.....	154	14	1	169
Cowlitz	88	112	199	.....	.....	1	.....	166	84	1	168	31	1	200
Douglas	107	106	212	.....	1	.....	1	183	29	2	188	23	3	214
1 unknown														
Ferry	49	37	59	.....	1	8	17	69	16	.....	69	16	.....	85
Franklin	65	66	130	.....	1	.....	.....	113	18	.....	115	16	.....	131
Garfield	48	55	108	.....	.....	.....	.....	92	10	1	97	6	.....	108
Grant	97	76	172	.....	1	.....	.....	187	30	6	187	31	5	173
Island	62	51	112	.....	.....	.....	1	66	47	.....	78	35	.....	113
Jefferson	47	66	105	.....	5	.....	3	78	33	2	81	30	2	113
King	618	519	1,041	3	90	2	1	599	529	9	661	478	3	1,137
Kitsap	205	208	376	1	20	5	7	242	162	4	262	145	1	408
Kittitas	246	212	450	5	1	.....	2	264	190	4	285	173	.....	458
Klickitat	108	78	177	1	2	.....	1	158	22	1	165	16	.....	181
Lewis	305	320	708	1	6	.....	.....	558	155	2	584	180	1	715
Lincoln	218	223	442	.....	2	.....	2	352	91	3	361	81	4	446
Mason	51	36	81	.....	4	.....	2	62	25	.....	68	19	.....	87
Okanogan	202	184	378	.....	.....	5	3	338	48	5	359	30	3	386
Pacific	212	153	361	.....	4	.....	.....	228	136	1	258	110	2	395
Pend Oreille	61	55	115	.....	1	.....	.....	101	18	2	98	16	2	116
Pierce	349	294	602	1	36	1	8	364	278	6	406	234	4	643
San Juan	46	43	82	.....	1	.....	.....	72	16	.....	70	17	1	88
Skagit	323	326	627	1	7	11	3	488	151	10	517	127	5	649
Skamania	27	21	47	.....	.....	.....	1	36	12	.....	35	18	.....	48

	389	325	606	7	6	6	453	258	3	533	178	3	714
Snohomish	277	267	541	8	.....	.....	449	90	6	467	73	4	544
Spokane	177	165	340	.....	.....	.....	276	62	4	298	43	1	342
Stevens	196	189	374	8	.....	.....	301	84	.....	329	59	.....	385
Thurston	25	36	60	.....	.....	.....	33	27	1	34	27	.....	61
Wahkiakum	313	263	572	2	.....	.....	444	128	4	478	101	2	576
Walla Walla	264	259	502	1	.....	.....	376	146	1	408	113	4	523
Whatcom	404	398	795	1	.....	.....	676	114	7	693	102	3	797
Whitman	567	510	1,002	7	.....	.....	894	167	6	911	150	6	1,067
Yakima													
CITIES—													
Bellingham	255	249	499	4	.....	.....	333	167	4	364	137	3	504
Everett	252	250	496	1	.....	.....	329	168	5	374	127	1	502
Seattle	2,735	2,383	4,691	403	.....	.....	2,935	2,135	49	3,167	1,945	6	5,118
Spokane	1,089	989	2,043	13	.....	.....	1,470	569	40	1,533	483	7	2,078
Tacoma	781	733	1,480	5	.....	.....	859	646	34	961	552	6	1,539
Totals	12,636 1 unknown	11,409	23,090	64	707	85	16,493	7,312	241	17,614	6,334	98	24,046

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CH

75 foot Concrete Arch Bridge Over Little Spokane River, State Road No. 23, near Chatteroy

STATE OF WASHINGTON

Sixth Biennial Report

OF THE

HIGHWAY COMMISSIONER

FOR THE PERIOD

Oct. 1, 1914, to Sept. 30, 1916

JAMES ALLEN

State Highway Commissioner

OLYMPIA, WASHINGTON

FRANK M. LAMBORN  PUBLIC PRINTER

1916

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LETTER OF TRANSMITTAL.

**STATE OF WASHINGTON,
OFFICE OF STATE HIGHWAY COMMISSIONER.
OLYMPIA, WASHINGTON, October 1st, 1916.**

Honorable Ernest Lister, Governor of Washington.

SIR: Pursuant to law, I have the honor to submit herewith the Sixth Biennial Report of this department for the period from October 1st, 1914, to September 30th, 1916, inclusive.

Very respectfully,

**JAMES ALLEN,
*Highway Commissioner.***

INTRODUCTION

It is the aim to present in the following pages a brief, concise, but complete report of the activities of this department during the period from October 1st, 1914 to September 30th, 1916, eliminating as far as possible such matter and phases of construction and operation in connection with the work under the jurisdiction of this office, which have been fully covered in previous reports of the Highway Commissioner. Repetition has been avoided when possible in this report, yet the previous reports contain a great deal of valuable information, and to those directly interested in the growth of the department and the cause of good roads, I would suggest that they familiarize themselves with the work accomplished by the department since its organization in 1905.

HIGHWAY BOARD.

ERNEST LISTER, *Chairman,*
Governor.

C. W. CLAUSEN,
State Auditor.

E. F. BLAINE,
Chairman Public Service
Commission.

EDWARD MEATH,
State Treasurer.

JAMES ALLEN, *Secretary,*
Highway Commissioner.

DEPARTMENTAL ROSTER.

JAMES ALLEN, Highway Commissioner

H. G. PORAK,
Assistant Highway Commissioner

GEO. F. COTTERILL,
Chief Engineer

E. R. HOFFMAN,
Chief Draftsman

CHAS. L. DUFAULT,
Right-of-Way Agent

GEORGIA MELVILLE, Accountant.

RECOMMENDATIONS.

I hereby make the following recommendations, believing that the adoption of them will result in greater efficiency and economy:

(1) That no new state roads be established until the present system of state roads is completed.

(2) That the apportionment to the various highways of the amount appropriated from the Public Highway Fund for the survey, construction and maintenance of primary and secondary highways of the state be left entirely in the hands of the State Highway Board. In this way the appropriation will be expended on such sections of state roads as are mostly in need of improvement, and will insure the completion of the system of state roads at the earliest possible date and in a most economical manner.

(3) That chapter 59, Session Laws of 1915, be modified to provide that 10 per cent of the taxes collected from the one mill levy for the construction and repair of state highways and bridges shall be set aside by the State Treasurer and used exclusively under the direction of the Highway Commissioner for the repair and maintenance of state roads that shall have been established and constructed.

(4) That 25 per cent of the surplus of all automobile license fees collected by the Secretary of State over and above the expenses of the issuing of such licenses be placed to the credit of the Public Highway Fund for the maintenance and repair of primary state highways, and to be expended under the direction of the State Highway Commissioner and upon vouchers approved by him.

(5) That the permanent highway acts requiring that all permanent highway contracts be awarded on the lump sum basis be changed to provide that the contracts may, at the option of the Highway Commissioner, be awarded on the unit price basis.

(6) That the five state rock quarries be disposed of at the earliest possible date. During the present biennium only two

of the quarries were operated at all. In the plants standing idle the machinery is fast deteriorating. Unless it is soon disposed of it will be practically worthless in a very short time. It is necessary to employ watchmen at a big expense to prevent the equipment from being carried away. On account of the radical changes in recent years in the type of road construction there is little demand for the products of the quarries, with the exception of that of the Meskill and Dixie plants. From the investment of \$259,890.67 but little benefit is being received, and the disposal of the rock crushing plants is, I believe, the only logical solution of the problem.

In the following pages of this report is contained a complete statement of the cost of construction and operation of these plants.

Section One

STATE ROADS

DESCRIPTION.

Prior to the Legislative Acts of 1911, highways of the State of Washington were classified as State Roads and State Aid Roads. During the session of 1911, the State Aid Road laws were repealed and Permanent Highways now take the place of them. During the legislative session of 1913, the State Roads were divided into two classes called Primary and Secondary roads. (The terms primary and secondary relate strictly to State Roads and not Permanent Highways.)

The following is a description of existing State Roads (Primary and Secondary) which have been authorized by legislative acts:

PRIMARY HIGHWAYS.

CENTRAL WASHINGTON HIGHWAY.

A highway connecting with the Inland Empire Highway at Pasco, Washington; thence by the most feasible route through Connell, Ritzville, Sprague, and Cheney to Spokane, Washington.

INLAND EMPIRE HIGHWAY.

A highway connecting with the Sunset Highway at or in the vicinity of the city of Ellensburg; thence by the way of North Yakima, Kennewick, Pasco, Walla Walla, Dayton, crossing the Snake River in the vicinity of Central Ferry, Colfax, Rosalia, Spokane, Deer Park, Loon Lake, Colville, to the international boundary line at Laurier.

Inland Empire Highway, Eastern Route, First Division: A highway known as the eastern route of the Inland Empire Highway, shall commence at or in the vicinity of the town of Dayton, thence over the most feasible route, through the town of Pom-

eroy, to the Idaho and Washington state line where said line crosses the steel bridge known as the Lewiston and Clarkston bridge.

Inland Empire Highway, Eastern Route, Second Division: The second division of the eastern route shall commence at a point on the Idaho and Washington line where the same crosses the public road known as the Lewiston and Uniontown road, thence over the most feasible route through Pullman, Palouse and Garfield; thence in a northerly direction through Oakesdale, joining the Inland Empire Highway at the most practicable point, to be determined by the Highway Commissioner.

McCLELLAN PASS HIGHWAY.

A highway starting at a connection with the Pacific Highway at Auburn, Washington; thence along the most feasible route through Enumclaw, following the route of former State Road No. 1, to North Yakima, Washington. (This was formerly established as State Road No. 1.)

White River Branch: At a point in Pierce County where said State Road No. 1 leaves the main channel of White River, a branch shall take off which shall follow up the White River Valley to a connection at the most practicable point with the Rainier National Park.

American River Branch: Another branch shall take off where Road No. 1 leaves the American River and shall follow said American River by the most feasible route to a connection with the Rainier National Park.

NATIONAL PARK HIGHWAY.

A highway starting from the Pacific Highway in the city of Tacoma; running thence southerly by the most feasible route to or near the town of Elbe, where it will branch, one section connecting with the government road in Rainier National Park at or near Ashford, Pierce County, and the other by the most feasible route through Mineral, Morton, Klickitat Prairie, Forest, Chehalis, Pe Ell, South Bend, to the ocean beach at Holman

in Pacific County. (This highway includes State Road No. 18 and a part of State Road No. 5.)

OLYMPIC HIGHWAY.

A highway starting from the Pacific Highway in Olympia, Washington, combining roads numbers nine (9) and fourteen (14), and completely circling the Olympic Peninsula, through the cities of Shelton, Hoodspport, Duckabush, Quilcene, Port Angeles, Hoquiam, Montesano, Elma and McCleary, reuniting with the Pacific Highway at Olympia.

PACIFIC HIGHWAY.

A highway starting at the international boundary line at Blaine, Washington; thence southerly by the most feasible route through the cities of Bellingham, Mount Vernon, Everett, Bothell, Seattle, Renton, along the easterly side of the White River Valley through Kent, Auburn, Tacoma, Olympia, Tenino, Centralia, Chehalis, to the southern boundary line of the state at the city of Vancouver, Washington. (What was formerly known as State Road No. 6 forms a part of this highway.)

SUNSET HIGHWAY.

A highway starting from the Pacific Highway at Renton, Washington; thence over the most feasible route through Snoqualmie Pass; from Snoqualmie Pass southeasterly by the most feasible route by way of Easton and Cle Elum to Ellensburg; thence by the most feasible route to the Columbia River near Vantage; thence by the most feasible route to Wenatchee; thence over the most feasible route, through Waterville and Spokane, to the state boundary, which shall be known as the Sunset Highway.

SECONDARY ROADS.

State Road No. 4, or the Sanpoil-Loomis Road: This road shall begin at the mouth of Sanpoil Creek on the Columbia River, and run thence as nearly as practicable over the present road to the city of Republic in Ferry County, Washington, and

thence from said city of Republic over the present traveled road as nearly as may be practicable to the town of Loomis, in Okanogan County, Washington.

Lincoln County Extension of State Road No. 4: Beginning at the mouth of the Sanpoil River on the north bank of the Columbia River in Ferry County, and extending thence southerly by the most practicable route to the town of Wilbur on the Central Washington Railroad in Lincoln County, Washington.

Kettle River Extension of State Road No. 4: This road shall begin at the city of Republic in Ferry County and run thence by the most feasible route to Curlew in said county; thence by the most feasible route along the east river bank of Kettle River to the international boundary line near the town of Ferry.

State Road No. 5, or the Cowlitz-Natches Road: This road shall begin at Riffe postoffice in Lewis County, thence up the Cowlitz River and its tributaries by way of Kosmos and Randle by the most feasible route to a connection with the McClellan Pass Highway.

State Road No. 7: Extension over the existing county roads of State Road No. 7 westerly to Renton, and thence to and along the west shore of Lake Washington to the city of Seattle, and the extension of State Road No. 7 easterly by the way of Swauk and Peshastin creeks and the Wenatchee Valley to the city of Wenatchee; thence to a point on the sixth standard parallel north in Douglas County near the town of Waterville; thence easterly over the existing county road as nearly as practicable through the towns of Coulee City and Wilbur and the city of Spokane to the Idaho line at the point where it intersects the north bank of the Spokane River.

State Road No. 8, or the Columbia River Road: This road shall begin at the town of Washougal in Clarke County, Washington, and run thence over the line as surveyed for such state

road through Clarke and Skamania counties, and thence over the most practicable route to the town of Goldendale, in Klickitat County. Extension of Secondary Highway No. 8, beginning at the town of Washougal, in Clarke County, the present western terminus of Secondary Highway No. 8, and extending west-erly by the most feasible route to Vancouver, Washington. Also commencing at the town of Goldendale, in Klickitat County, the present eastern terminus of said road, and extending the same northeasterly by the most feasible route to Mabton, in Yakima County.

State Road No. 10, or the Wenatchee-Oroville Road: This road shall begin at the lower bridge on the Wenatchee River in Chelan County, Washington, and shall run thence over the present constructed state road to Maple Creek; thence by the most practicable route to the town of Pateros, in Okanogan County; thence over the present constructed county road as nearly as practicable through the towns of Brewster and Okanogan, and thence by the most practicable route to the north line of Okanogan County, Washington, near the town of Oroville.

State Road No. 11, or the Skagit River Road: This road shall begin at Marblemount in Skagit County, Washington, and shall run thence in a northerly direction up the Skagit River by the most practicable route to make connection with the present wagon road near the mouth of Mill Creek; thence by the most practicable route to Barron, in Whatcom County, Washington.

State Road No. 12, or the Methow-Barron Road: This road shall begin in the county road on the south side of and near the mouth of the Methow River, and shall follow as nearly as practicable the present surveyed line for such road, to the 20-mile post; thence by the most practicable route to the town of Winthrop; thence up the south fork of the Methow River Valley and over the summit of the Cascade Mountains, by the most practicable route, to Barron, in Whatcom County, Washington.

State Road No. 15, or the Lewis River Road: Beginning at Woodland in Cowlitz County and running thence up the north bank of Lewis River, following as nearly as practicable the county road, and continuing to the mouth of the Big Muddy, a tributary of Lewis River in Skamania County.

State Road No. 16, or the Garfield-Asotin Road: Beginning at a point where the county road intersects the north line of the northeast quarter of Section 4, Township 9 North, Range 42 East, W. M., in Garfield County, and running thence in a southerly course by the most feasible route along the divide between the Tucannon River and Pataha Creek and the divide between the Tucannon River and Asotin Creek to the summit of the Blue Mountains, near what is known as Summit Springs; thence by the most feasible route southerly to the divide between Wenatchee and Grouse creeks, thence following the divide southwesterly to the Asotin County road near the upper crossing of Grouse Creek at or near the line between Sections 5 and 6, in Township 6 North, Range 43 East, W. M., in Asotin County, Washington.

State Road No. 17, or the Island-Skagit Road: The same being a road and two bridges crossing the United States Military Reservations Nos. 14 and 15 and connecting the county roads of Island and Skagit counties.

State Road No. 18: Beginning at Alder in Pierce County and running in a southerly direction by the way of Elbe to a point in State Road No. 5 near Kosmos in Lewis County.

State Road No. 19: This road shall begin at the town of Kelso in Cowlitz County, and run thence by the most feasible route through the towns of Cathlamet and Skamokawa in Wahkiakum County, to the town of Naselle in Pacific County, thence by the most feasible route to a connection with the National Park Highway.

State Road No. 20: This road shall begin at the town of Raymond in Pacific County and run thence by the most feasible route to Aberdeen in Chehalis County.

State Road No. 21: This road shall begin at Kingston, thence by the most feasible route through Port Gamble, Poulsbo and Bremerton to a connection with the Olympic Highway between Shelton and Hoodspport in Mason County.

State Road No. 22: This road shall begin at Meyers Falls in Stevens County, and run thence through Kettle Falls, Daisy, Gifford, Cedonia and Hunters to Fruitland; thence through and across the Detillion bridge across the Spokane River to a connection with the Sunset Highway at Davenport in Lincoln County.

State Road No. 23: This road shall begin at the city of Spokane in Spokane County, and run thence by way of Mead to the town of Newport.

North Central Highway: This road shall begin at the city of Davenport in Lincoln County and run thence southerly and westerly by the most feasible route through Harrington, Odessa, Krupp and Ephrata to a connection with the Sunset Highway.

CONSTRUCTION.

Under the present statutes the primary highways are constructed and maintained at the expense of the Public Highway Fund of the state, and are under the immediate supervision and control, both for construction and maintenance, of the State Highway Department. The secondary highways are constructed by the state from the Public Highway Fund, but are required to be maintained by the counties in which they are located, and in the event that any county does not desire to maintain such secondary highways, the state may abandon the same as a public highway, and allow the right of way to revert to the abutting property.

In 1913, 5 per cent of taxes collected under the Public Highway levies was set aside and used exclusively for the repair and maintenance of primary highways which had been established and constructed. In 1915 this maintenance fund was increased to 7½ per cent of the taxes collected from the levies from the Public Highway Fund.

Prior to 1905, as far back as 1893, various state highways and trails were authorized by the state legislatures, but no work of a permanent nature was done. From April 1, 1905, to March 31, 1913, approximately \$1,000,000 was expended on state roads during this eight-year period, covering an improvement of approximately 193 miles of road.

Under the present road program as authorized by the state legislatures of 1913 and 1915, for the construction and maintenance of highways in the state, a levy of one and one-half mills is made for the construction and maintenance of permanent highways, and a levy of one mill for the construction and maintenance of state roads, primary and secondary. From these levies approximately \$2,500,000 is secured annually for the construction of state roads and permanent highways, adding approximately four hundred miles of improved roads each year to the road system of the state. Many sections of the state have already been opened up to road communication which heretofore have been practically inaccessible.

CENTRAL WASHINGTON HIGHWAY.

SECTION	New Construction (Miles)		
	April 1, 1915	1915-1917	Total April 1, 1917
Adams county	19.5	19.5
Lincoln county	4.25	4.25
Totals.....	23.75	23.75

There was appropriated for the survey and construction of the Central Washington Highway from Ritzville northerly the sum of \$59,036.00.

A location survey was made of the section between Ritzville and Sprague in Adams and Lincoln counties, a distance of 23.75 miles. A contract was awarded by the Highway Board to Mitchell Brothers of Spokane, Washington, for the construction of the entire section. The roadway is of standard section, 30 feet in cuts and 24 feet in fills.

80-foot Concrete Arch Bridge Over Mashel River, Pierce County.

470-foot Cantilever Arch Bridge Over Cowlitz River at Mayfield, Lewis County.

The work under this contract consisted of grading and construction of drains, and one 20-foot reinforced concrete arch. The amount of work done under this contract was \$40,622.64.

By resolution of the Highway Board, the graveling of this section, and protecting of the grade, was authorized with the balance of the fund available after the completion of the contract.

The work under Mitchell Bros. contract was completed in September, 1916.

STATEMENT.

Appropriation		\$59,036 00
Estimates and force account.....	\$29,032 00	
Engineering (location and construction) ..	8,609 23	
Right of way.....	600 00	
Advertising and miscellaneous.....	60 65	
Balance Oct. 1, 1916 (including retained per cent)	20,734 12	
Total.....		\$59,036 00

INLAND EMPIRE HIGHWAY.

SECTION	New Construction (Miles)			Old Roads Gravelled (Miles)		
	April 1, 1915	1915-1917	Total April 1, 1917	April 1, 1915	1915-1917	Total April 1, 1917
Stevens county		5.0	5.0			
Spokane county	26.1		26.1		6.8	6.8
Whitman county	17.0	12.7	29.7		17.3	17.3
Whitman county (2d division)		17.6	17.6			
Columbia county		5.3	5.3			
Walla Walla county.....	24.4	9.2	33.6			
Benton county		11.6	11.6			
Yakima county		1.6	1.6			
Kittitas county .....		.2	.2			
Totals.....	67.5	68.2	135.70		24.1	24.1

The following amounts were appropriated or reappropriated for the survey and construction of the Inland Empire Highway:

Colville South	\$29,518 00
Spokane South	3,076 74
Colfax North and South.....	50,077 09
Rosalia South 2nd Division.....	27,008 00
Pullman South 2nd Division.....	30,000 00
Walla Walla N. E.....	32,909 57
Walla Walla West.....	31,649 92
Kennewick West	34,336 00
Ellensburg-North Yakima	10,000 00

Colville South: The section of road improved under this appropriation extends from the city limits of Colville southerly a distance of five miles. Two contracts were awarded. The one for grading the five-mile section was let to Mr. E. D. Miner of Colville, Washington, the final estimate for this work being \$11,798.19. The road was graded to the standard section, 24 feet in fills and 30 feet in cuts, with a maximum grade of 5 per cent.

The contract for surfacing this section which was graded under Mr. Miner's contract was awarded to H. C. Root of Spokane. The surfacing consisted of gravel and shale 4 inches deep and 14 feet wide. The final estimate on this contract amounted to \$3,203.37. This contract was completed in July, 1916.

In addition to the two contracts mentioned above, \$699.88 was expended by day labor in making further improvement of this section. The total cost of grading and graveling this section was \$15,701.44, or \$3,140.00 per mile. The cost is segregated as follows:

STATEMENT.

Appropriation		\$29,518 00
Estimates and force account.....	\$15,701 44	
Engineering (location and construction) ..	5,047 90	
Right of way.....	350 00	
Advertising and miscellaneous.....	202 52	
Balance Sept. 30, 1916.....	8,216 14	
Total.....		\$29,518 00

Spokane South: The unexpended balance of the 1913-15 appropriation for this section of the Inland Empire Highway, amounting to \$3,076.74, was reappropriated. This was expended by day labor in surfacing the worst places in the road between Spokane and Rosalia.

Colfax North and South: From the appropriation of \$50,007.09 for this section, the following contracts were awarded and completed:

Contract No. 227: This improvement consisted of grading 4.0 miles between Steptoe and Cashup in Whitman County by

the General Construction Company. This work was completed August 11, 1915, the final estimate amounting to \$13,261.49 or \$3,315.00 per mile for grading only.

Contract No. 225: Under this contract 5.5 miles of road was graded, beginning at the end of the permanent highway south of Colfax and extending southerly toward Central Ferry to Union Flat Creek. The construction of one 40-foot reinforced concrete arch was included under this contract. This work was done by the H. L. Wilson Company, and was completed January 1, 1916. The final estimate was \$22,110.57, the cost, including 40-foot arch, \$4,020 per mile.

Contract No. 250: This consists of an extension of Contract No. 225, extending southerly from Union Flat Creek a distance of 3.0 miles. This contract was awarded to H. C. Root of Spokane and was completed December 7, 1915, the amount of the final estimate being \$11,835.40. The cost of grading this extension was \$3,945 per mile.

The following is a statement of the condition of this appropriation September 30, 1915:

Appropriation		\$50,077 09
Estimates and force account.....	\$45,668 23	
Engineering (location and construction) ..	3,909 84	
Right of way.....	192 00	
Advertising and miscellaneous.....	307 02	
Total.....		\$50,077 09

Rosalia South, Second Division—Contract No. 262: Under this contract 8.9 miles of road were graded between Rosalia and Oakesdale on the second division of the eastern route. The contract was awarded to the General Construction Company and will be completed about October 15, 1916.

STATEMENT.

Appropriation		\$27,008 00
Estimates and force account.....	\$16,799 72	
Engineering (location and construction) ..	3,751 59	
Right of way.....	110 00	
Advertising and miscellaneous.....	21 60	
Balance Sept. 30, 1916 (including retained per cent)	6,325 09	
Total.....		\$27,008 00

Pullman South, Second Division—Contract No. 259: A section beginning at a point about four miles south of Pullman, and extending southerly a distance of 8.7 miles to Colton, was graded under contract with G. L. Stickler of Davenport, Washington. The roadbed is of standard cross-section, and no grades exceed 5 per cent. The work was completed in August, 1916. Final estimate, \$23,509.25. Cost of grading per mile, \$2,702.00.

STATEMENT.

Appropriation		\$30,000 00
Estimates, force account, etc.....	\$24,153 67	
Engineering (location and construction) ..	4,128 55	
Right of way.....	1,032 56	
Advertising, etc.	63 30	
Balance Sept. 30, 1916.....	621 92	
		<hr/>
Total.....		\$30,000 00

Walla Walla Northeasterly—Contract No. 256: Awarded to General Construction Company for grading 6.8 miles of road extending northeasterly from Waitsburg toward Dayton. A number of bad grade crossings have been eliminated by the new location. This work was completed June 26, 1916. Final estimate, \$17,923.09.

In addition to the above, \$1,060.87 was spent by day labor on this section, making the total cost of grading \$18,983.46, or \$2,792.00 per mile. This section has been surfaced by Columbia and Walla Walla counties from the permanent highway funds.

Plans have been completed and the work will be advertised for grading about two miles of the section extending northerly from Dayton toward Central Ferry, with the unexpended balance of the appropriation.

STATEMENT.

Appropriation		\$32,909 57
Estimates, force account, etc.....	\$20,750 39	
Engineering (location and construction) ..	3,985 52	
Right of way.....	1,542 65	
Advertising, etc.	78 65	
Balance Sept. 30, 1916.....	6,552 36	
		<hr/>
Total.....		\$32,909 57

Walla Walla West—Contract No. 261: Awarded to H. L. Wilson Company of Walla Walla. Consists of grading about 6.7 miles of road between Touchet and Wallula, including several reinforced concrete bridges. This contract was completed in September, 1916. Final estimate, \$27,880.92.

STATEMENT.

Appropriation		\$31,649 92
Estimates, force account, etc.....	\$27,950 17	
Engineering (location and construction) ..	3,629 36	
Advertising, etc.	48 90	
Balance Sept. 30, 1916.....	21 49	
		<hr/>
Total.....		\$31,649 92

Kennewick West—Contract No. 260: This improvement consisted of the construction of one 40-foot reinforced concrete arch and grading 11.6 miles of road beginning at Kiona and extending easterly toward Richland. The contract was awarded to the H. L. Wilson Company of Walla Walla. The work was completed in August, 1916. Final estimate, \$20,879.97.

The unexpended balance as shown by the statement below will be used in surfacing with gravel and otherwise protecting the portion graded under Contract No. 260.

STATEMENT.

Appropriation		\$34,336 00
Estimates, force account, etc.....	\$21,077 33	
Engineering (location and construction) ..	5,989 63	
Right of way.....	13 25	
Advertising, miscellaneous, etc.....	7 40	
Balance Sept. 30, 1916.....	7,248 39	
		<hr/>
Total.....		\$34,336 00

Ellensburg-North Yakima—Contract No. 234: This improvement began at a point about 700 feet northerly of the southern boundary line of Section 31, Township 17 North, Range 18 East, W. M., and extended in a southwesterly direction a distance of one mile. Approximately one-fifth of the improvement lies in Kittitas County, the remainder in Yakima County. The contract was awarded to the Quigg Construction Company of Wenatchee and called for a 20-foot roadbed both in cuts and fills.

This work was completed August 27, 1915, the final estimate being \$4,417.90.

In addition to this contract, the sum of \$3,904.74 was expended by day labor in improving about 0.8 miles of road between Ellensburg and North Yakima, which were badly in need of improvement.

STATEMENT.

Appropriation		\$10,000 00
Estimates, force account, etc.....	\$8,322 64	
Engineering (location and construction) ..	1,055 96	
Right of way.....		
Advertising, etc.	7 88	
Balance Sept. 30, 1916.....	613 52	
Total.....		\$10,000 00

McCLELLAN PASS HIGHWAY.

SECTION	New Construction (Miles)			Old Roads Gravelled (Miles)		
	April 1, 1915	1915-1917	Total April 1, 1917	April 1, 1915	1915-1917	Total April 1, 1917
King county	6.4	.....	6.4	7.2	13.5	20.7
Pierce county .....	.....	8.5	8.5	.....	.....	.....
Yakima county	5.6	14.0	19.6	.....	.....	.....
Totals.....	12.0	22.5	34.5	7.2	13.5	20.7

The following appropriations were made for the survey and construction of the McClellan Pass Highway:

Enumclaw to Summit.....	\$90,225 64
Naches to Summit.....	57,684 11

Enumclaw to Summit: The location of this section of the McClellan Pass Highway between the Greenwater River and the Summit was completed during 1915.

Contract No. 965: This improvement extends from the Greenwater River easterly along the White River a distance of 8.5 miles. The contract for this improvement was awarded to Sloane Brothers, Seattle, Washington, for the sum of \$48,867.60, based upon the preliminary estimate. The width of roadbed is 20 feet in cuts and in fills. On September 30, 1916, this work is approximately 85 per cent completed.

Contract No. 216: Approximately 13.5 miles of the old road, previously constructed on this highway from the Green-

water River westerly toward Enumclaw, was resurfaced with gravel by the Department under the day labor system. The sum of \$25,679.59 has been spent to date on this work.

With the completion of the permanent highway just east of Enumclaw this highway will be in excellent condition as far as the improvements extend.

STATEMENT.

Appropriation		\$90,225 64
Estimates, force account, etc.....	\$44,939 59	
Engineering (location and construction) ..	10,298 24	
Advertising and miscellaneous.....	28 50	
Balance Sept. 30, 1916.....	34,959 31	
Total.....		\$90,225 64

Naches to Summit—Contract No. 249: In August, 1915, bids were opened and a contract awarded to Rajotte, Fobert & Winters for the construction of 14 miles of this highway between Naches and the Summit in Yakima County. The roadbed on this section is 20 feet in width. The work under this contract was completed July 6, 1916. The final estimate was \$47,115.18 or \$3,365.00 per mile for grading.

In addition to the above, the sum of \$3,564.45 has been expended by day labor in riprapping, surfacing and otherwise protecting the portion graded under Contract No. 249.

STATEMENT.

Appropriation		\$57,684 11
Estimates, force account, etc.....	\$50,679 68	
Engineering (location and construction) ..	6,897 15	
Advertising, miscellaneous	96 63	
Balance Sept. 30, 1916.....	10 70	
Total.....		\$57,684 11

NATIONAL PARK HIGHWAY.

SECTION	New Construction (Miles)			Old Roads Surfaced (Miles)		
	April 1, 1915	1915-1917	Total April 1, 1917	April 1, 1915	1915-1917	Total April 1, 1917
Pierce county	4.3	1.5	5.8	.....	5.0	5.0
Lewis county	5.5	9.0	14.5	2.7	5.5	8.2
Pacific county	2.5	10.8	12.8	5.1	4.2	9.3
Totals.....	12.3	20.8	33.1	7.8	14.7	22.5

The following appropriations were made by the 1915 Legislature:

Alder to Elbe.....	\$10,000 00
Mineral to Morton.....	71,700 00
Nemah to Ocean.....	76,821 85
Mayfield Bridge	30,000 00
Mashell Bridge and approaches.....	35,000 00

ALDER-ELBE.

The work done under the appropriation for this section consisted of surfacing with gravel about five miles of grade previously constructed and improving drainage, etc. This work was done by the Department under the day labor system. The sum of \$8,646.63 was expended September 30, 1916.

MINERAL-MORTON.

The work on this section of the National Park Highway was also done under the day labor system. Eight miles of new work was opened up and completed under the 1915 appropriations, three and one-half miles of which were surfaced with gravel by day labor. This work was completed in October, 1915.

Contract No. 253: In August, 1915, a contract was awarded to Torger Peterson, for surfacing with gravel, ten miles of this road between Mineral and the east fork of Tilton River; 10,134 cubic yards of material were placed. This work was completed November 20, 1915. Final estimate, \$19,761.30.

STATEMENT.

Appropriation	\$71,700 00
Transferred to Mayfield bridge fund.....	\$241 50
Transferred to Mashell bridge fund.....	4,664 59
Estimates, force account, etc.....	63,850 83
Engineering (location and construction) ..	1,650 27
Right of way.....	1,244 91
Advertising, etc.	47 90
Total.....	\$71,700 00

Nemah to Ocean—Contract No. 204: This contract was awarded to the Raymond Construction Company on July 20, 1914, for clearing, grading and draining two miles of this highway from Bear River westerly in Pacific County, but on ac-

count of the short season the contractor was unable to complete the work within the time specified. The unexpended balance on April 1, 1915, was reappropriated and the contract completed from the reappropriation. This improvement called for a 16-foot roadway. This work was completed July 29, 1915. The final estimate for this work was \$9,708.70, of which the sum of \$4,681.82 was paid from the 1915 reappropriation.

Contract No. 252: This contract, providing for the clearing, grading and draining of 7.0 miles of this highway between Nemah and the Nasel River in Pacific County, was awarded to the Burnett Construction Company of Seattle, Washington. A roadway 20 feet wide is being constructed. On September 30, 1916, this contract is approximately 75 per cent completed.

Contract No. 274: This contract, providing for the clearing, grading and draining of 3.3 miles of the National Park Highway westerly from Bear River in Pacific County was awarded to Mr. M. P. Zindorf on August 10, 1916, for the lump sum of \$24,885.00. The width of roadbed on this section is 22 feet in cuts and 20 feet in fills. The date for the completion of this contract is April 20, 1917. Approximately 10 per cent of the work was completed September 30, 1916.

STATEMENT.

Appropriation		\$76,821 85
Estimates, force account, etc.....	\$28,715 27	
Engineering (location and construction) ..	5,717 35	
Right of way.....	90 80	
Advertising, etc.	86 17	
Balance Sept. 30, 1916.....	42,212 26	
Total.....		\$76,821 85

Mayfield Bridge: The plans for this bridge were designed by this Department. The structure is a deck cantilever arch bridge, consisting of two anchor spans with cantilever arms, each 196 feet in length, and one suspended span 78 feet in length. The total length of the structure is 470 feet. The trusses are designed to carry a uniform live load of 80 lbs. per sq. ft. over the entire structure and the floor system a concentrated load consisting of a 20-ton road roller; 277.8 tons of

steel were required in superstructure. The bridge spans a deep ravine in the course of the Cowlitz River. The height of the floor above low water is 115 feet and that above high water 62 feet. The roadway is 20 feet in width.

Contract No. 237: The contract for the completion of this structure was awarded to N. H. Beer of Seattle on June 14, 1915. The work was completed January 17, 1916. Final estimate, \$29,008.50.

The sum of \$241.50 was transferred to the Mayfield Bridge Fund from the Mineral-Morton Fund.

STATEMENT.

Appropriation	\$30,000 00
Transferred from Mineral-Morton appropriation.....	241 50
Estimates, force account, etc.....	\$29,015 50
Engineering (preliminary and construction)	1,146 80
Advertising and miscellaneous.....	79 20
Total.....	\$30,241 50

Mashell Bridge and Approaches: The work under this appropriation consisted of the relocation and construction of the highway across the Mashell Canyon in Pierce County, and the construction of an 80-foot span, reinforced concrete arch bridge of the Luten type, across the Mashell River. The sum of \$4,664.59 was transferred from the Mineral-Morton appropriation to this fund.

Contract No. 226: This contract consisted of clearing, grading and draining the approaches to the Mashell River bridge. The improvement is one mile in length. Approximately 80,952 cu. yds. of material were required to be moved. The contract was awarded to Kendle and Eppler of Eatonville, Washington, in May, 1915. The final estimate on this contract amounted to \$22,967.25. The work was completed June 1, 1916.

Contract No. 243: This contract was awarded to H. C. Malott of Seattle, Washington, for the construction of the 80-foot span, reinforced concrete arch bridge over the Mashell River in July, 1915. Approximately 900 cu. yds. of concrete

and 20,000 lbs. of steel were required in the structure. This work was completed on May 22, 1916. Final estimate, \$9,901.91.

STATEMENT.

Appropriation	\$35,000 00
Transferred from Mineral-Morton fund.....	4,664 59
Estimates, force account, etc.....	\$36,328 00
Engineering (location and construction) ..	2,568 04
Right of way.....	630 20
Advertising and miscellaneous.....	138 35
Total.....	\$39,664 59

OLYMPIC HIGHWAY.

SECTION	New Construction (Miles)			Old Roads Gravelled (Miles)		
	April 1, 1915	1915-1917	Total April 1, 1917	April 1, 1915	1915-1917	Total April 1, 1917
Thurston county		7.75	7.75			
Mason county	9.0	8.5	17.5		15.2	15.2
Jefferson county	9.3	5.9	15.2		9.8	9.8
Ollam county		3.0	3.0			
Grays Harbor county.....	7.9	10.5*	18.4			
Totals.....	26.2	35.65	61.85		24.5	24.5

* 10.5 miles cleared and grubbed only.

The following appropriations were made by the 1915 Legislature:

Mud Bay to McCleary.....	\$38,500 00
Shelton to Quilcene.....	96,250 00
East Beach to Piedmont.....	9,625 00
Lake Quinault Northwesterly.....	48,229 96

Mud Bay to McCleary, Thurston County—Contract No. 245: The contract for this improvement, consisting of clearing, grading and draining about 7.75 miles on this section extending from the county line between Thurston and Grays Harbor counties to Mud Bay in Thurston County, a point about 5½ miles west of Olympia, was awarded to Rignell and Bankston of Tacoma, Washington, in July, 1915.

The work under this contract was completed on February 1, 1916. Final estimate, \$34,301.55. This improvement connects with the existing road to McCleary, and cuts off twelve miles from the distance between Olympia and Elma by the old route.

This saving of twelve miles will apply equally as well to all travel between Puget Sound and Grays Harbor points. This road, however, will require surfacing to make it suitable for winter traffic. Its usefulness has been demonstrated during the past summer and it should be made an all-year road.

STATEMENT.

Appropriation		\$38,500 00
Estimates, force account, etc.....	\$34,001 55	
Engineering (location and construction) ..	2,371 24	
Right of way.....	2,025 04	
Advertising, etc.	102 17	
Total.....		\$38,500 00

Shelton to Quilcene: Within the past four years this section of the Olympic Highway has undergone a great change. Highway communication was opened up for the first time between the Hood Canal and other parts of the state, and a good gravel roadway constructed on easy grades. The new road affords not only an outlet to settlers along the canal who have hitherto been dependent upon water transportation, but has proved to be a very popular drive for automobilists as well.

Contracts Nos. 212 and 221: The work under these contracts was performed by this department under the day labor system. Two portions of this section were improved. The first beginning at a point on the old road about 5.5 miles north of Shelton and extending northerly a distance of 10.5 miles by way of Purdy Canyon to a point 1½ miles south of Hoodport, crossing the Skokomish River about 1½ miles below the bridge on the old road. Two miles of this portion was partly graded by Mason County. The greater part of this improvement is entirely new construction, of standard width of roadbed, eliminating the dangerous Webb Hill. At the crossing with the Skokomish River a 195-foot steel span is being constructed under Contract No. 248.

The second portion improved under this contract, began at a point approximately 4 miles north of Duckabush and covered a distance of 3.9 miles, 2.5 miles of which was constructed by

force account contract with J. Coyne. The work consisted of clearing, grading, draining and surfacing. These two portions were completed at a cost of \$77,362.43, or \$5,372.00 per mile. This included the construction of a 119-foot Howe truss timber bridge over the Duckabush River.

Contract No. 248: This improvement consists of the construction of a 195-foot steel Petit through truss over the Skokomish River in Section 15, Township 21, North, Range 4 West, W. M. Bids were opened in August, 1915, and the contract awarded to Yelverton & Wolf of Olympia, Washington. The contract called for the completion of the work on February 1, 1916. During the freshets in December, 1915, however, the falsework for the superstructure was taken out and a portion of the steel was lost in the river. On account of damage to the steel, it was necessary to have new members fabricated to replace those damaged or lost. An extension of time, in which to complete the contract was accordingly granted. The work was finished on October 9, 1916. The final estimate amounted to \$12,677.68.

STATEMENT.

Appropriation		\$96,250 00
Estimates, force account, etc.....	\$82,403 71	
Engineering (location and construction) ..	6,649 97	
Right of way.....	1,198 04	
Advertising, etc.	45 80	
Balance Sept. 30, 1916.....	5,952 48	
		<hr/>
Total.....		\$96,250 00

East Beach to Piedmont, Clallam County—Contract No. 220: The work under this improvement was performed by Hugh E. Govan, by force account, and consisted of clearing, grading and draining. It was started in May, 1915, and completed on August 21, 1915. A roadbed 20 feet wide was constructed.

STATEMENT.

Appropriation		\$9,625 00
Force account	\$8,754 52	
Engineering (location and construction) ..	786 91	
Balance Sept. 30, 1916.....	83 57	
		<hr/>
Total.....		\$9,625 00

Lake Quinault Northwesterly—Contract No. 258: Inas-
much as the appropriation for the survey and construction of
the Olympic Highway northwesterly from Lake Quinault was
insufficient to construct a road that would be of any advantage
to the traveling public, the Highway Commissioner was in-
structed to undertake by day labor the clearing and grubbing
of this road to be carried as far as the money available would
permit. Work was started on this improvement in October,
1915. To September 30, 1916, 46.6 acres have been cleared
and grubbed, representing a distance of 9.5 miles, at a cost of
\$592.00 per acre, divided as follows: Clearing, \$287.00 per
acre, grubbing, \$305.00 per acre. The location of this section
has been completed to the Queets River.

STATEMENT.

Appropriation		\$48,175 00
Force account	\$32,999 26	
Engineering (location and construction) ..	6,189 04	
Right of way.....	104 65	
Balance Sept. 30, 1916.....	8,882 05	
Total.....		\$48,175 00

PACIFIC HIGHWAY.

SECTION	New Construction (Miles)			Old Roads Surfaced (Miles)		
	April 1, 1915	1915-1917	Total April 1, 1917	April 1, 1915	1915-1917	Total April 1, 1917
Whatcom county	6.9	2.75	9.65	.....	10.2	10.2
Skagit county	3.8	.....	3.8	.....	3.8	3.8
Snohomish county	6.5	3.33	9.83	.....	.....	.....
King county .....	.....	2.06	2.06	.....	.....	.....
Pierce county .....	.....	2.8	2.8	.....	.....	.....
Thurston county .....	.....	8.0	8.0	.....	.....	.....
Lewis county	1.75	4.2	5.95	.....	1.75	1.75
Cowlitz county	5.04	3.83	8.87	.....	5.3	5.3
Olarke county	3.7	8.5	12.20	2.0	3.4	5.4
Totals.....	27.69	34.97	62.66	2.0	24.45	26.45

The Legislature of 1915 appropriated \$423,389.00 for sur-
veys and construction on the Pacific Highway divided as follows:

North of King County.....	\$147,377 00
Renton to Kent.....	34,387 00
Olympia to Tacoma.....	49,175 00
Toledo to Vancouver.....	192,500 00

North of King County—Contract No. 223: In May, 1915, bids were opened for surfacing 3.0 miles of the Pacific Highway between Blaine and Custer in Whatcom County and the contract was awarded to Worthen and Satterthwaite of Lynden, Washington. The work under this contract consisted of surfacing with gravel 8 inches deep and 16 feet wide. The work was completed on September 30, 1915. Final estimate, \$6,445.70.

Contract No. 247: The work under this contract consisted of clearing, grading, draining and surfacing about 2.75 miles of road between Custer and Enterprise. Width of roadway, 31 feet in cuts and 24 feet in fills. Surfacing, 14 feet in width and 6 inches in depth. Bids were opened in July, 1915, and the contract awarded to Chas. E. Lind, of Bellingham, Washington. The work was completed on January 31, 1916. Final estimate \$12,169.94.

Contract No. 217: The work under this improvement covering the section between Blanchard and Bellingham was performed by S. Murchison under a force account contract awarded on May 31, 1915. The work consisted of widening the roadbed from a width of 16 feet to a width of 20 feet and constructing concrete trestles and concrete retaining walls on about 5 miles of the Waterfront Road in Whatcom and Skagit Counties and reconstructing about 6 miles of the Pacific Highway between the Waterfront Road and Bellingham.

On the Waterfront Road, considerable difficulty was encountered during course of construction in preventing rock from being thrown on the Great Northern Railway Company track below the road. A number of claims were made by the Great Northern Railway Company for damages on this account. With the completion of the Waterfront Road one of the most scenic drives in the state has been opened to travel.

Between the Waterfront Road and Bellingham a large fill requiring about 16,700 cubic yards of material was made at Wild Cat Cove, thereby eliminating a steep grade on bad alignment and avoiding two crossings with the interurban tracks.

The sum of \$104,881.83 has been expended on the improvement of this section between Blanchard and Bellingham.

Contract No. 242: The work under this improvement consisted of clearing, grading, draining and surfacing 3.3 miles of the Pacific Highway from Marysville south in Snohomish County and was done by this department under the day labor system. This work was begun in July, 1915, and completed in November, 1915. The amount expended on this work was \$16,187.34. A standard roadbed 30 feet wide in cuts and 24 feet in fills was constructed and surfaced with gravel 16 feet wide and 6 inches deep.

STATEMENT.

Appropriation		\$147,377 00
Estimates, force account, etc.....	\$140,037 53	
Engineering (location and construction) ..	7,278 42	
Advertising, etc.	61 05	
Total.....		\$147,377 00

Renton to Kent, King County: On April 25, 1916, the Highway Board established the location of the Pacific Highway between Renton and Kent as follows: Beginning at the southerly limits of the city of Renton, thence westerly along the section line between Sections 18 and 19, Township 23 North, Range 5 East, W. M., to the quarter corner between Sections 18 and 19; thence south along the north and south center line of Sections 19, 30 and 31, said township and range, a distance of approximately 2.3 miles to the intersection with the county road east of Orillia; thence along the most feasible route to the city of Kent.

On July 8, 1916, the Highway Commissioner was authorized to advertise for bids for the construction of the section between Renton and Orillia.

Contract No. 273: Bids for the clearing, grading and draining of this section, beginning at the city limits of Renton and extending southerly a distance of two miles toward Orillia, were opened on August 7, 1916, and the contract awarded to M. P. Zindorf of Seattle, Washington.

A roadbed 28 feet wide is being constructed. On September 30, 1916, the work under the contract was approximately 12 per cent completed. The preliminary estimate was \$17,148.00.

The contract calls for the completion of the work by November 15, 1916.

STATEMENT.

Appropriation		\$34,387 00
Estimates, force account, etc.....	\$1,280 64	
Engineering (location and construction) ..	684 90	
Advertising, etc.	42 90	
Balance Sept. 30, 1916.....	32,378 56	
<hr/>		
Total.....		\$34,387 00

Olympia to Tacoma: A large part of the old railroad grade between Lacey and Nisqually was obtained from the Northern Pacific Railway Company for highway purposes. The acquisition of this right of way enabled the department to secure a location for the Pacific Highway between these points on practically a level grade, and with good alignment, eliminating the dangerous Nisqually Hill on the old road. By widening the railroad grade an excellent roadbed was secured.

Contract No. 228: In May, 1915, bids were opened for clearing, grading and draining 8.0 miles beginning at Lacey and extending to the Nisqually River. The contract was awarded to L. H. Goerig of Seattle. A standard roadbed 30 feet in cuts and 24 feet in fills was constructed. The work was completed on November 6, 1915. Final estimate \$20,466.32.

Contract No. 218: On account of the long haul on material for the fill just east of Nisqually River in Pierce County, it was found that this work could be done most expeditiously by the railroad company by reason of having the necessary equipment and tracks already on the ground. Accordingly a contract was awarded to the Northern Pacific Railway Company on May 10, 1915, for making this fill 0.5 miles in length at 22½ cents per cubic yard of material placed. This work was completed on July 1, 1915, the cost of the work being \$3,561.75.

Contract No. 257: This improvement consisted of grading, draining and graveling about 2.3 miles of the Pacific Highway from Nisqually Station northerly under the day labor system. This work was started on November 9, 1915, and was completed on April 9, 1916.

The entire distance covered by Contracts Nos. 228, 218 and 257, in all about 10.8 miles in length was surfaced with gravel and maintained by dragging and resurfacing when necessary under the day labor system.

STATEMENT.

Appropriation		\$49,125 00
Estimates, force account, etc.....	\$41,698 85	
Engineering (location and construction) ..	2,265 88	
Right of way.....	2,428 63	
Advertising	57 35	
Balance Sept. 30, 1916.....	2,674 29	
<hr/>		
Total.....		\$49,125 00

Toledo to Vancouver—Contract No. 231: Bids for clearing, grading and draining of 6 miles of the Pacific Highway from Toledo southerly, being a continuation of the work done on this section in 1914, were opened in May, 1915, and a contract awarded to Andrew and Harrer of Portland, Oregon. The work was completed on October 20, 1915. Final estimate, \$20,567.26, or a cost of \$3,428 per mile. This section was surfaced under Contract No. 269.

Contract No. 269: In March, 1916, bids were opened and a contract awarded to Jarvis and Burkheimer of Seattle, Washington, for surfacing 7.7 miles of the Pacific Highway from Toledo southerly in Lewis and Cowlitz Counties, with gravel. The contract consists of surfacing 6 miles of the grading done under Contract No. 231 and the 1.7 miles of the road south of Toledo, which was constructed in 1914.

The contract called for the completion of the work on September 1, 1916; on account of the extremely wet season, however, an extension of time was granted. The estimated cost of the work under the contract is \$13,652.80. The work was 67 per cent completed on September 30, 1916.

Contract No. 222: In April, 1915, bids were opened for surfacing with crushed rock 2.0 miles of the Pacific Highway from Carrollton northerly in Cowlitz County, and a contract was awarded to Montague and O'Reilly Co., of Portland, Oregon. The 8-foot strip of surfacing placed in 1914 was widen-

ed to 16 feet. Crushed rock from St. Helens quarry was used, placed in two courses, rolled and sprinkled. Three Thousand One Hundred cubic yards of rock were placed. The contract was completed on July 1, 1915. Final estimate, \$6,198.50.

Contract No. 229: In June, 1915, a contract was awarded to Hendricks and Ward of Centralia, Washington, for clearing, grading and draining 1.5 miles of the Pacific Highway from Kalama northerly. A road of standard cross-section was constructed. This work was completed on August 12, 1915. Final estimate \$8,066.47. This section was surfaced with crushed rock by force account contract with Porter and Conley, at a cost of \$5,749.74.

Contract No. 224: Bids for this improvement were opened in April, 1915, and the contract awarded to Porter & Conley of Portland, Oregon, for surfacing with crushed rock 3.3 miles of the Pacific Highway from Kalama southerly in Cowlitz County. This portion of the Pacific Highway was graded by Honor Camp and day labor forces during the year 1914. The section of surfacing placed was 16 feet in width and 8 inches in depth, requiring 6,125 cubic yards of material. This work was completed August 13, 1915. Final estimate, \$12,507.17.

Contract No. 232: In June, 1915, bids were opened for surfacing with crushed rock 2.0 miles of the Pacific Highway between Woodland and LaCenter in Clarke County and the contract was awarded to Porter and Conley of Portland, Oregon. This work is an extension southerly of the surfacing done on this section in 1914. The rock was spread to a width of 16 feet and was laid in two courses, sprinkled and rolled with binder clay thrown in to a depth of 6 inches. Four Thousand Three Hundred and Twelve cubic yards of material was placed on this section at a total cost of \$8,536.28. It was completed on July 14, 1915.

Contract No. 241: Bids were called for clearing, grading and surfacing the remaining mile of the Woodland-LaCenter section. No bids, however, were received, so a force account

contract was awarded to the General Construction Company, of Spokane, Washington, for doing this work at cost plus 10 per cent, the General Construction Company being engaged at the time on the construction of the Vancouver northerly section of the Pacific Highway. This one mile of road was graded and surfaced with crushed gravel 16 feet wide and 2 inches of sand placed on top of the gravel. Satisfactory results were obtained in this way on account of the large per cent of binder clay in the gravel. This work was completed on October 2, 1915, at a total cost of \$11,400.19.

Contract No. 233: Bids were opened in June, 1915, for clearing and grading 7.5 miles of the Pacific Highway between Vancouver and LaCenter, beginning at the end of the pavement at Salmon Creek and extending northerly to Pioneer. A standard roadbed 30 feet wide in cuts and 24 feet wide in fills was constructed. The work was completed on September 16, 1915. Final estimate \$37,108.57.

On account of the clay formation, graveling was necessary so that the new work would be available for travel during the winter months. Accordingly a force account contract was awarded to the General Construction Company for doing this work at cost plus 10 per cent. Two crushers were secured from Clarke County and gravel hauling started on August 15, 1915.

Six miles of this section were surfaced with crushed gravel 16 feet wide; 35 cubic yards to the station and 1.1 miles were surfaced with a strip 8 feet wide. Work was shut down on November 15, 1915, on account of rain. The remaining .4 mile was planked in January, 1916. The cost of surfacing this section was \$30,460.26.

Contract No. 272: In July, 1916, bids were opened for surfacing with gravel 1.4 miles of the Pacific Highway between Vancouver and LaCenter and the contract was awarded to L. F. Kline. This work consisted of widening the 8-foot strip 1.1 miles in length, which was surfaced under Contract No. 233, to a width of 16 feet, and also surfacing .4 mile of plank road with gravel.

The contract for this improvement calls for the completion of the work on September 15, 1916. On September 30, 1916, practically all of the work was completed.

STATEMENT.

Appropriation		\$192,500 00
Estimates, force account, etc.....	\$157,236 14	
Engineering	9,214 18	
Right of way.....	380 40	
Advertising	521 31	
Balance Sept. 30, 1916.....	25,147 97	
Total.....		\$192,500 00

SUNSET HIGHWAY.

SECTION	New Oonstruction (Miles)			Old Roads Gravelled (Miles)		
	April 1, 1915	1915-1917	Total April 1, 1917	April 1, 1915	1915-1917	Total April 1, 1917
King county	20.4	.....	20.4	.....	20.4	20.4
Kittitas county	7.6	27.0	34.6	.....	8.5	8.5
Douglas county	18.5	5.0	18.5	.....	11.1	11.1
Lincoln county	17.2	14.5	31.7	.....	.....	.....
Totals.....	58.7	46.5	105.2	.....	40.0	40.0

The following appropriations were made by the 1915 Legislature:

(1) North Bend to Cle Elum.....	\$160,453 59
(2) Ellensburg to Wenatchee.....	29,475 00
(3) Wenatchee to Waterville.....	59,036 00
(4) Reardan West	59,301 99

North Bend to Cle Elum: In 1914, twenty-eight miles of this section were constructed. During the present biennium this new construction extending from a point about four miles east of North Bend across the summit of the Cascades to the easterly end of Lake Keechelus, in all about 28.9 miles, was surfaced with gravel by the day labor system. The total cost of the work was \$81,838.00.

Contract No. 264: In January, 1916, bids were opened for grading and draining 13.5 miles of the Sunset Highway between Easton and Cle Elum in Kittitas County, and the contract was awarded to the General Construction Company of Spokane. The

construction of the reinforced concrete arch bridges required on this section was covered by Contract No. 267. A standard roadbed 20 feet in cuts and fills is being constructed. It is estimated that the work on this contract will be completed by October 15, 1916. The preliminary estimate for this work is \$29,564.50. The value of work done to September 30, 1916, is \$19,374.72.

Contract No. 267: The contract for the construction of the bridges between Easton and Cle Elum was awarded to the Security Bridge Company of Minneapolis, Minnesota, in January, 1916, for the sum of \$23,200. The work under the contract consisted of the construction of the following reinforced concrete arch bridges:

- One 30-ft. span over Little Creek
- One 50-ft. span over Big Creek
- Two 65-ft. spans over Cle Elum River
- Two 100-ft. spans over Yakima River

In this contract, as in most other contracts during the present year, the work has been considerably delayed on account of the scarcity of labor. It is estimated that the contract will be completed on December 1, 1916.

STATEMENT.

Appropriation		\$160,453 59
Estimates, force account, etc.....	\$111,024 06	
Engineering (location and construction) ..	4,835 84	
Right of way.....	1,127 49	
Advertising, etc.	75 58	
Balance Sept. 30, 1916.....	43,390 62	
Total.....		\$160,453 59

Ellensburg to Wenatchee—Contract No. 268: Bids were opened in February, 1916, for grading and draining 10.0 miles of the Sunset Highway from Vantage Ferry westerly toward Ellensburg. The contract was awarded to Martin Holm of Ellensburg. A standard roadbed 20 feet in cuts and fills was constructed. On September 30, 1916, the contract was approximately 90 per cent completed.

In addition to Contract No. 268, $3\frac{1}{2}$ miles of road between the west end of Contract No. 268, and a point $13\frac{1}{2}$ miles west of Vantage Ferry was improved, under the day labor system, by straightening the alignment, reducing bad grades, widening the roadbed and surfacing. The sum of \$4,984.82 was expended on September 30, 1916, in doing this work.

STATEMENT.

Appropriation		\$29,475 00
Estimates, force account, etc.....	\$18,426 62	
Engineering (location and construction) ..	4,555 79	
Advertising, etc.	92 55	
Balance Sept. 30, 1916.....	6,400 04	
		<hr/>
Total.....		\$29,475 00

Wenatchee to Waterville: A location survey was made of the unimproved portion of this section of the Sunset Highway from Orondo to Waterville in 1915. On account of the ideal conditions for honor camp work, the construction of 5 miles of this section, beginning at Waterville and extending westerly, was undertaken with Honor Camp No. 5, which was established in Coberly Canyon. A force of 20 to 70 honor men have been employed between May, 1915, and July 1, 1916, when the honor men were released. The work performed by Honor Camp No. 5 was quite successful as evidenced by the cost of the work shown in the statement, under the heading "Day Labor."

After the abandonment of the Honor Camp on July 1, 1916, the work on the 5 mile section was completed by day labor forces. This work will be completed about October 15, 1916.

The remainder of the section between the Honor Camp work and Orondo was improved during the present biennium by the county from the Permanent Highway Fund, and County Road and Bridge Fund, and by the State day labor forces. Eleven miles of the section between Wenatchee and Orondo was resurfaced with gravel by S. G. Kinder of Bridgeport, under Contract No. 266. This was paid for from the Maintenance East Side Fund, and is covered more fully under that heading.

STATEMENT.

Appropriation		\$59,036 00
Estimates, force account, etc.....	\$54,448 99	
Engineering (location and construction) ..	2,705 59	
Right of way.....	250 00	
Balance Sept. 30, 1916.....	1,631 42	
Total.....		\$59,036 00

Reardan West—Contract No. 230: Bids for grading and draining 14.5 miles of Sunset Highway between Rocklyn and Creston were opened in June, 1915, and the contract awarded to the Mohr Construction Company of Waterville, Washington. This contract is an extension of the 1914 improvement west of Davenport. A standard roadbed 30 feet in cuts and 24 feet in fills was constructed. This improvement was completed May 1, 1916. Final estimate, \$49,946.22. This portion of the Sunset Highway was surfaced with gravel by Lincoln County from the Permanent Highway Fund.

STATEMENT.

Appropriation		\$59,301 99
Estimates, force account, etc.....	\$55,632 84	
Engineering (location and construction) ..	3,348 40	
Right of way.....	280 00	
Advertising	40 75	
Total.....		\$59,301 99

SECONDARY HIGHWAYS.

STATE ROAD NO. 4—FERRY COUNTY.

SECTION	New Construction (Miles)		
	April 1, 1915	1915-1917	Total April 1, 1917
Ferry county	12.6	27.0	39.6
Lincoln county	11.0	.....	11.0
Totals.....	23.6	27.0	50.6

The sum of \$29,518.00 was appropriated for the improvement of State Road No. 4 in Ferry County. The work was done by the day labor system under the direction of the Highway Department. From Republic westerly to the Okanogan

County Line, approximately \$7,800 was spent on a revised location of the road approximately three miles in length. This consisted of fairly heavy construction. About \$200 was spent on the improvement of the remaining portion of this section.

From Republic to West Fork the located line of the Spokane and British Columbia Railway is largely in conflict with the location of State Road No. 4, and no attempt was made to do any permanent work where such conflict exists. About three miles of road in this section which did not conflict with the railway location was improved by straightening the alignment and reducing the grades. The remainder of the work was improved sufficiently to keep the road open to travel.

Between West Fork and Keller the greater portion of the work consisted of improving the existing road by straightening the alignment, reducing grade, providing necessary drainage and bridges and clearing of right of way.

Between Keller and the Columbia River approximately two miles of new road was constructed in order to eliminate bad grades, and alignment in the old road. The new location included some rather heavy work and a timber bridge consisting of one 60 foot span, one 33 foot span and one 36 foot span. The following is a statement of the sections improved, showing the expenditures on each section:

SECTION	Length (Miles)	Road Im- proved (Miles)	Expendi- ture
Republic westerly to Okanogan county line.....	0.2	3.2	\$8,000 00
Republic—West Fork	15.6	7.4	6,200 00
West Fork—Keller	34.3	12.2	6,318 00
Keller—Columbia river	0.8	4.2	9,000 00
Totals.....	62.9	27.0	\$29,518 00

STATEMENT.

Appropriation		\$29,518 00
Construction, etc.	\$25,872 49	
Engineering (location and construction) ..	3,048 88	
Right of way.....	260 00	
Balance Sept. 30, 1916.....	336 63	
Total.....		\$29,518 00

STATE ROAD NO. 5.

SECTION	New Construction (Miles)		
	April 1, 1915	1915-1917	Total April 1, 1917
Lewis county	36.4	1.0	37.4
Yakima county	10.1	.....	10.1
Totals.....	46.5	1.0	47.5

Nesika Bridge and Approaches: The balance remaining in the fund for the construction of the Nesika bridge and approaches on April 30, 1915, was reappropriated by the 1915 Legislature. The balance on April 30, 1915, was \$2,370.35. Practically the entire reappropriation has been expended in reconstructing the approaches to the bridge by day labor under the supervision of the County Engineer of Lewis County.

STATEMENT.

Appropriation		\$2,370 35
Expended in construction.....	\$2,367 90	
Balance Sept. 30, 1916.....	2 45	
Total.....		\$2,370 35

STATE ROAD NO. 8.

SECTION	New Construction (Miles)			Old Roads Surfaced (Miles)		
	April 1, 1915	1915-1917	Total April 1, 1917	April 1, 1915	1915-1917	Total April 1, 1917
Clarke county	16.5	.....	16.5	.....	.....	.....
Skamania county	10.1	4.3	14.4	.....	1.6	1.6
Klickitat county	1.75	.....	1.75	.....	.....	.....
Totals.....	28.35	4.3	32.65	.....	1.6	1.6

The sum of \$67,311.99 was appropriated for surveys and construction between Butler and Cooks.

Stevenson West—Contract No. 236: One and six tenths miles of State Road No. 8, beginning at a point about 1 mile west of Stevenson and extending westerly, was graded by Honor Camps Nos. 3 and 4 in 1914.

On June 15, 1915, a camp was established and the surfacing of this section with crushed rock, and removal of slides, was un-

dertaken by day labor. Skamania county machinery was used to crush the rock. An 8 foot strip of crushed rock or about 2,870 cubic yards of material was placed. This work was completed on September 15, 1915. In addition to this work 2.3 miles of new construction, being a continuation of the 1914 work, was completed by clearing, grading and surfacing. For expenditure see financial statement.

Collins to Cooks—Contract No. 254: The work under this contract consisted of clearing, grading and draining about four miles of State Road No. 8 between Cooks and Collins in Skamania County. About three miles of this work was undertaken by S. Murchison under Force Account Contract for cost plus 10 per cent. This section of State Road No. 8 is the heaviest piece of construction in Skamania County. The steep rock cliffs with the Spokane, Portland & Seattle Railroad at the base made construction extremely difficult. The work was almost entirely in solid rock, some of the cuts being as much as 80 feet in height.

One mile of this section just east of Collins, consisting principally of earthwork, was opened up by day labor.

Approximately 50 per cent of the entire work between Collins and Cooks has been completed.

STATEMENT.

Appropriation		\$67,311 99
Estimates, force account, etc.....	\$62,149 48	
Engineering (location and construction) ..	2,252 66	
Right of way.....	700 00	
Balance Sept. 30, 1916.....	2,209 85	
Total.....		\$67,311 99

STATE ROAD NO. 10.

SECTION	New Construction (Miles)			Old Roads Gravelled (Miles)		
	April 1, 1915	1915-1917	Total April 1, 1917	April 1, 1915	1915-1917	Total April 1, 1917
Chelan county	13.2	2.0	15.2	.....	.....	.....
Okanogan county	3.0	13.5	16.5	.....	.....	.....
Totals	16.2	15.5	31.7	.....	.....	.....

The following appropriations were made by the 1915 Legislature:

Between Maple Creek in Chelan	
County and Okanogan County line..	\$20,000 00
In Okanogan County.....	29,704 18

Chelan County: Location surveys were made of 7.3 miles of State Road No. 10 between Chelan and the Okanogan County line and 4.0 miles of road between Chelan and Chelan Falls.

On June 23, 1916, the Highway Board by motion and resolution authorized the expenditure of the appropriation for work in Chelan County between Maple Creek and the Okanogan County line, on the section between the town of Chelan and the Okanogan County line by the day labor system, beginning the work approximately one mile north of Chelan.

This work will be started about October 1, 1916.

The equipment now being used on the Coberly Canyon work between Wenatchee and Waterville in Douglas County will be transferred to this work.

STATEMENT.

Appropriation		\$20,000 00
Expended Sept. 30, 1916.....	\$1,486 04	
Balance September. 30, 1916.....	18,513 96	
Total.....		\$20,000 00

Okanogan County—Contract No. 235: The appropriation for State Road No. 10 in Okanogan County was expended in improving some of the worst portions of the road which were badly in need of improvements, by the day labor system. Approximately 13.0 miles of road was constructed in this manner, the amount available being expended as follows:

Pateros South	6.5 miles	\$15,415 61
Shell Rock Point.....	0.5 miles	2,187 07
Tonasket North	3.75 miles	6,942 35
Oroville South	2.75 miles	5,130 14
Totals.....	13.5 miles	\$29,675 17

STATEMENT.

Appropriation		\$29,704 18
Construction	\$28,896 78	
Engineering (location and construction) ..	722 56	
Right of way.....	70 00	
Balance Sept. 30, 1916.....	14 84	
Total.....		\$29,704 18

STATE ROAD NO. 11.

SECTION	New Construction (Miles)		
	April 1, 1915	1915-1917	Total April 1, 1917
Whatcom county		2.0	2.0
Skagit county	15.75	.....	15.75
Totals.....	15.75	2.0	17.75

There was appropriated by the 1915 Legislature the sum of \$5,000 for surveys and construction of State Road No. 11 in Whatcom and Skagit Counties. On April 23, 1915, the Highway Board authorized this work to be done by day labor under supervision of the county engineer. With the money available an 80 foot timber bridge was constructed across Diasbud Creek and several bad portions of road improved.

STATEMENT.

Appropriation		\$5,000 00
Expended on construction.....	\$4,875 05	
Balance Sept. 30, 1916.....	124 95	
Total.....		\$5,000 00

STATE ROAD NO. 12.

SECTION	New Construction (Miles)		
	April 1, 1915	1915-1917	Total April 1, 1917
Okanogan county	5.83	19.5	25.33
Totals.....	5.83	19.5	25.33

There was appropriated by the 1915 Legislature for surveys and construction of State Road No. 12 in Okanogan County the sum of \$29,571.19. This appropriation was expended by this

department by the day labor system. The work was started in June, 1915, and completed in October, 1915. In all approximately 19½ miles of road were improved with the money available, as follows:

Pateros North	4.0 miles	\$9,389 93
Methow North and South.....	10.5 miles	10,892 45
Twisp South	3.5 miles	8,001 33
Winthrop North	1.5 miles	1,635 26
Totals.....	19.5 miles	\$29,018 97

In addition to the above approximately \$118.71 was expended in miscellaneous force account work on State Road No. 12.

STATEMENT.

Appropriation		\$29,571 19
Construction	\$28,614 78	
Engineering (location and construction) ..	383 40	
Right of way.....	139 50	
Balance Sept. 30, 1916.....	433 51	
Total.....		\$29,571 19

STATE ROAD NO. 18.

SECTION	New Construction (Miles)		
	April 1, 1915	1915-1917	Total April 1, 1917
Lewis county		5.0	5.0
Totals.....		5.0	5.0

There was appropriated for surveys and construction of State Road No. 18 in Lewis County the sum of \$20,000, with which 5 miles of road between Morton and Kosmos were constructed and surfaced with gravel by day labor forces. A standard roadbed 20 feet wide was constructed with no grades exceeding 6 per cent.

STATEMENT.

Appropriation		\$20,000 00
Construction	\$19,451 62	
Engineering (location and construction) ..	233 15	
Balance Sept. 30, 1916.....	315 23	
Total.....		\$20,000 00

STATE ROAD NO. 23.

SECTION	New Construction (Miles)		
	April 1, 1915	1915-1917	Total April 1, 1917
Pend Oreille county	15.5	15.5
Spokane county	19.0	19.0
Totals.....	34.5	34.5

There was appropriated by the 1915 Legislature for the survey and construction of State Road No. 23 the sum of \$104,016.00.

Contract No. 244: In July, 1915, bids were opened for clearing, grading and draining 35.5 miles of State Road No. 23 between Mead and Newport in Pend Oreille and Spokane Counties, and a contract was awarded to the General Construction Company. A standard roadbed 30 feet wide in cuts and 24 feet in fills was constructed. In this contract was included the construction of two reinforced concrete arch bridges of 70 and 75 foot spans respectively. The work was completed in April, 1916. Final estimate, \$91,327.32.

STATEMENT.

Appropriation		\$104,016 00
Estimates, force account, etc.....	\$91,489 39	
Engineering (location and construction) ..	10,855 58	
Right of way.....	1,574 35	
Advertising, and miscellaneous.....	96 68	
Total.....		\$104,016 00

MAINTENANCE.

The following appropriations were made by the 1915 Legislature for the maintenance of Primary Highways:

West Side	\$99,760 00
East Side	45,597 00
State Highways (in addition to above)	50,000 00

“West Side” and “East Side,” as designated above is intended to mean all territory west and east respectively of the Columbia River up to its junction with the line dividing Okanogan and Chelan counties, thence following the west line of Okanogan County to the international boundary line. The following is a statement of the above appropriations on September 30, 1916.

WEST SIDE MAINTENANCE.

Appropriation		\$99,760 00
Expended Sept. 30, 1916:		
McClellan Pass	\$903 36	
National Park	24,644 22	
Olympic	22,185 91	
Pacific	27,726 29	
Sunset	14,976 20	
General	5,893 15	
Balance Sept. 30, 1916.....	3,430 87	
		<hr/>
Total.....		\$99,760 00

EAST SIDE MAINTENANCE.

Appropriation		\$45,597 00
Expended Sept. 30, 1916:		
Inland Empire Highway.....	36,205 47	
Sunset Highway	9,062 16	
Lewiston-Clarkston Bridge	139 84	
Balance Sept. 30, 1916.....	189 53	
		<hr/>
Total.....		\$45,597 00

ADDITIONAL MAINTENANCE, CHAP. 113.

Appropriation		\$50,000 00
Expended Sept. 30, 1916:		
Olympic Highway	\$33,333 12	
Inland Empire Highway.....	2,586 42	
Central Washington Highway.....	165 25	
McClellan Pass Highway.....	326 85	
State Road No. 23.....	114 17	
Lewiston-Clarkston Bridge	64 40	
Balance Sept. 30, 1916.....	13,409 79	
		<hr/>
Total.....		\$50,000 00

For statement of re-appropriations, see "Financial Statement."

With the rapidly increasing mileage of finished roads the problem of proper maintenance is growing in importance. While the patrol system is generally employed yet on most of the Highways it has been necessary to employ large gangs of men to keep the roads open to traffic and in good condition.

On newly graded roads particularly the maintenance has been very heavy, due principally to the new and unsettled condition of the roads, and the great amount of traffic which passes over them. Of the newly constructed roads the Sunset Highway between North Bend and Easton has been the most difficult to maintain. During the past year particular attention has been given to drainage in this section, and the road should now be able to withstand the winter rains and snow with little damage. During the winter it has been necessary occasionally to re-

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Waterfront Road, Pacific Highway, Skagit County

195-foot Bridge Over Skokomish River, Olympic Highway, Mason County

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lieve the bridges near the summit, extending as far east as Easton, of the immense weight of snow which accumulates on them. On account of the backward spring this year, it was impossible to open this road before July 1st, 1916, and in order to open it by that time it required shoveling through large banks of snow. Since the Reclamation Service has cut all the timber along Lake Keechelus below the road this portion will hereafter get all the sun and be opened much earlier in the spring than in the timbered portions. The altitude and consequent deep snows will always delay the opening of the road until late spring.

The McClellan Pass Highway has been maintained in a splendid condition all summer, and besides maintaining the surface by applying gravel and dragging and keeping the ditches open, the bank of the White River between Slippery Creek and the Greenwater River has been riprapped and otherwise protected, where there is a tendency for the high water to undermine the toe of the fill. A good connection has also been made between the work done by the State and the county road.

Owing to the nature of the soil and to the difficulty of properly draining the roadbed, this section of the National Park Highway between Mineral and Morton in Lewis County has been very difficult to maintain. Before this road can be put in proper shape it will require additional surfacing with gravel or crushed rock.

On the section of the Inland Empire Highway between Walla Walla and Waitsburg in Walla Walla County, 9 miles of the roadway which was surfaced under the Permanent Highway Acts, was scarified, adding new screenings with sufficient binder clay and then re-rolled.

Owing to the large amount of travel on this section of the Inland Empire Highway it will be impossible to maintain it as a gravel road, and this 18 miles between Waitsburg and Walla Walla should be hard-surfaced as soon as possible.

The other sections of Primary roads constructed by the State have been maintained in the usual manner by the patrol

system, each patrolman being provided with a split log drag or steel drag depending upon the character of the road material.

The following contracts were awarded for maintenance work:

Contract No. 255: This contract was awarded to W. G. Mulligan & Company, of Spokane, for surfacing 17.3 miles of the Inland Empire Highway between Rosalia and Colfax in Whitman County with gravel. The preliminary estimate for this work was \$21,120.00. The contract will be completed about October 5, 1916.

Contract No. 271: This contract, consisting of surfacing with gravel about 6.8 miles of the Inland Empire Highway from Spangle northerly, was awarded to J. E. Cunningham, of Spokane, Washington. The preliminary estimate for this work was \$7,344.00. Work under the contract will be completed about December 1, 1916.

Contract No. 266: This contract consisting of surfacing with gravel about 11.1 miles of the Sunset Highway between Wenatchee and Orondo, was awarded to S. G. Kinder of Bridgeport, Washington, the preliminary estimate for this work being \$7,568.60. This contract was completed in July, 1916.

DAY LABOR AND HONOR CAMP WORK.

Under the day labor system, the results obtained with respect to both cost and character of construction, other conditions being equal, is dependent entirely upon the ability of the superintendent who is in charge of the work. During the present biennium an excellent record has been made by the Department in the construction of roads under the day labor system. The following table gives the unit costs of the principal items of work in connection with the construction performed under the day labor, force account and honor camp systems. These costs as a whole are much less than contract prices on work of similar character, which means a considerable saving to the taxpayers of the state, and a corresponding increase in the mileage of roads constructed with the money available.

UNIT PRICES ON DAY LABOR AND HONOR CAMP WORK.

ITEM	Unit	Day Labor Olympic Highway Shelton to Quileuse			Force Account Olympic Highway Shelton to Quileuse			Day Labor State Road No. 18 Morton to Kosmos			Honor Camp Sunset Highway Wenatchee to Weterville		
		Quantity	Unit Cost	Quantity	Unit Cost	Quantity	Unit Cost	Quantity	Unit Cost	Quantity	Unit Cost	Quantity	Unit Cost
Clearing	Acres.	42.7	101.20	28.4	161.78	17.1	126.91	20.7	202.77	16.1	50.00		
Grubbing	Acres.	12.6	156.11	26.6	266.11	11.7	148.80	14.2	247.08	8.5	240.00		
Excavation, common	On. yd.	48,992	.212	61,680	.339	51,972	.198	25,255	.225	16,851	.20		
Excavation, loose rock	On. yd.	9,505	.264	7,739	.632	10,215	.263	1,587	.497	20,374	.30		
Excavation, solid rock	On. yd.	4,825	.574	6,087	1.00	8,738	.99	2,589	.871	24,381	.604		
Common borrow	On. yd.	4,864	.290			500	.108						
Side surfacing	Lin. ft.	5,900	.212	11,850	.088			1,500	.118				
Riprap, hand placed	On. yd.	80	1.51							72	2.00		
Riprap, loose	On. yd.									685	.75		
Concrete, first class	On. yd.									10.6	13.00		
Concrete, second class	On. yd.												
Concrete pipe culverts, 12" diameter	Lin. ft.	258	.75										
Concrete pipe culverts, 15" diameter	Lin. ft.	208	1.30										
Concrete pipe culverts, 24" diameter	Lin. ft.									172	3.00		
Concrete pipe culverts, 36" diameter	Lin. ft.									72	4.00		
Timber in place	M. B. M.	115,673	21.73							78	5.00		
Rock wall	On. yd.												
Overhaul	On. yd.												
Cribbing logs in place	Lin. ft.	44,737	.055	1,110	.085	2,000	.128	780	.809	1,844	2.50		
Gravel surfacing	On. yd.			2,565	1.55					2,940	.02		
										5,203	.06		

RIGHT OF WAY SECURED

**FOR THE PERIOD BEGINNING OCTOBER 1ST, 1914, AND ENDING
OCTOBER 1ST, 1916.**

CENTRAL WASHINGTON HIGHWAY.

Ritzville-Sprague Section in Adams and Lincoln Counties: Right of way obtained from the SE $\frac{1}{4}$ of SE $\frac{1}{4}$ of Sec. 14, Twp. 19 N., R. 35 E. W. M., to Lot 6, Block 77, Third Addition to the city of Sprague, in Sec. 23, Twp. 21, N., R. 38 E. W. M., inclusive. Distance 23.75 miles.

INLAND EMPIRE HIGHWAY.

Richland-Kiona Section in Benton County: Right of way obtained from Lot 3, Sec. 19, Twp. 9 N., R. 27 E. W. M., to Lot 7, Sec. 5, Twp. 10 N., R. 28 E. W. M., inclusive, and from the SE $\frac{1}{4}$ of NW $\frac{1}{4}$ of Sec. 4, Twp. 10 N., R. 28 E. W. M., to the N $\frac{1}{2}$ of NW $\frac{1}{4}$ of Sec. 11, Twp. 9 N., R. 28 E. W. M., inclusive. Distance 12.15 miles.

Wallula-Touchet Section in Walla Walla County: Right of way obtained from W $\frac{1}{2}$ of NE $\frac{1}{4}$ of SW $\frac{1}{4}$ of Sec. 34, Twp. 7 N., R. 33 E. W. M., to the SW $\frac{1}{4}$ of SW $\frac{1}{4}$ of Sec. 32, Twp. 7 N., R. 33 E. W. M., inclusive, and from the NE $\frac{1}{4}$ of SE $\frac{1}{4}$ of Sec. 36, Twp. 7 N., R. 32 E. W. M., to the SE $\frac{1}{4}$ of NE $\frac{1}{4}$ of Sec. 30, Twp. 7 N., R. 32 E. W. M., inclusive, and from the NE $\frac{1}{4}$ of NW $\frac{1}{4}$, Sec. 30, Twp. 7 N., R. 32 E. W. M., to the SW $\frac{1}{4}$ of NW $\frac{1}{4}$, Sec. 26, Twp. 7 N., R. 31 E. W. M., inclusive. Distance 12.40 miles.

Waitsburg-Dayton Section in Walla Walla and Columbia Counties: Right of way obtained from the N $\frac{1}{2}$ of SW $\frac{1}{4}$ of Sec. 12, Twp. 9 N., R. 37 E. W. M., to the S $\frac{1}{2}$ of SE $\frac{1}{4}$ of Sec. 35, Twp. 10 N., R. 38 E. W. M., inclusive. Distance 7.00 miles.

Colfax South Section in Whitman County: Right of way obtained from N $\frac{1}{2}$ of SW $\frac{1}{4}$ of Sec. 8, Twp. 15 N., R. 42 E.

W. M., to the SW $\frac{1}{4}$ of SW $\frac{1}{4}$ of Sec. 21, Twp. 16 N., R. 43 E. W. M., inclusive. Distance 8.75 miles.

Cashup-Steptoe Section in Whitman County: Right of way obtained from the SE $\frac{1}{4}$ of NW $\frac{1}{4}$ of Sec. 35, Twp. 18 N., R. 43 E. W. M., to the SE $\frac{1}{4}$ of NW $\frac{1}{4}$ of Sec. 15, Twp. 18 N., R. 43 E. W. M., inclusive. Distance 3.60 miles.

Colville South Section in Stevens County: Right of way obtained from the NW $\frac{1}{4}$ of Sec. 16, Twp. 35 N., R. 39 E. W. M., to the SW $\frac{1}{4}$ of NW $\frac{1}{4}$ of Sec. 3, Twp. 34 N., R. 39 E. W. M., inclusive. Distance 5.00 miles.

Pullman South Section in Whitman County: Right of way obtained from the E $\frac{1}{2}$ of NW $\frac{1}{4}$ of Sec. 27, Twp. 14 N., R. 45 E. W. M., to the SE $\frac{1}{4}$ of SE $\frac{1}{4}$ of Sec. 27, Twp. 13 N., R. 45 E. W. M., inclusive. Distance 8.75 miles.

Rosalia-Oakesdale Section in Whitman County: Right of way obtained from the SW $\frac{1}{4}$ of SW $\frac{1}{4}$ of Sec. 23, Twp. 20 N., R. 43, E. W. M., to the NW $\frac{1}{4}$ of NE $\frac{1}{4}$ of Sec. 22, Twp. 19 N., R. 44 E. W. M., inclusive. Distance 8.90 miles.

McCLELLAN PASS HIGHWAY.

Greenwater River to Summit Section in Pierce County: Right of way obtained from Lot 7, Sec. 4, Twp. 19 N., R. 9 E. W. M., to the SW $\frac{1}{4}$ of SE $\frac{1}{4}$ of Sec. 14, Twp. 16 N., R. 10 E. W. M., inclusive. Distance about 27.00 miles.

NATIONAL PARK HIGHWAY.

Mashel Bridge Section in Pierce County: Right of way obtained from the NE $\frac{1}{4}$ of NW $\frac{1}{4}$ of Sec. 21, Twp. 16 N., R. 4 E. W. M., to SW $\frac{1}{4}$ of NE $\frac{1}{4}$ of Sec. 21, Twp. 16, N., R. 4 E. W. M., inclusive. Distance 1.0 mile.

Mineral-Morton Section in Lewis County: Right of way obtained from the SE $\frac{1}{4}$ of NW $\frac{1}{4}$ of Sec. 9, Twp. 14 N., R. 5 E. W. M., to the SE $\frac{1}{4}$ of SW $\frac{1}{4}$ of Sec. 35, Twp. 13 N., R. 4 E. W. M., inclusive. Distance about 12.75 miles.

Nemah-Nasel River Section in Pacific County: Right of way obtained from the NE $\frac{1}{4}$ of SE $\frac{1}{4}$ of Sec. 27, Twp. 12 N., R. 10

W. W. M., to the NW $\frac{1}{4}$ of SE $\frac{1}{4}$ of Sec. 15, Twp. 11 N., R. 10 W. W. M., inclusive. Distance 7.00 miles.

Bear River West Section in Pacific County: Right of way obtained from the SE $\frac{1}{4}$ of SE $\frac{1}{4}$ of Sec. 24, Twp. 10 N., R. 11 W. W. M., to the NW $\frac{1}{4}$ of the NE $\frac{1}{4}$ of Sec. 28, Twp. 10 N., R. 11 W. W. M., inclusive. Distance 3.3 miles.

OLYMPIC HIGHWAY.

Mud Bay-McCleary Section in Thurston County: Right of way obtained from the NW $\frac{1}{4}$ of SW $\frac{1}{4}$ of Sec. 13, Twp. 18 N., R. 4 W. W. M., to the NE $\frac{1}{4}$ of NW $\frac{1}{4}$ of Sec. 13, Twp. 18 N., R. 3 W. W. M., inclusive. Distance 14.0 miles.

Hoodsport to Shelton Section in Mason County: Right of way obtained from the SW $\frac{1}{4}$ of SW $\frac{1}{4}$ of Sec. 12, Twp. 22 N., R. 4 W. W. M., to the NE $\frac{1}{4}$ of SE $\frac{1}{4}$ of Sec. 16, Twp. 21 N., R. 4 W. W. M., inclusive, and from the NW $\frac{1}{4}$ of NW $\frac{1}{4}$ of Sec. 22, Twp. 21 N., R. 4 W. W. M., to the NE $\frac{1}{4}$ of SW $\frac{1}{4}$ of Sec. 26, Twp. 21 N., R. 4 W. W. M., inclusive, and from the NW $\frac{1}{4}$ of SW $\frac{1}{4}$ of Sec. 25, Twp. 21 N., R. 4 W. W. M., to the NE $\frac{1}{4}$ of SE $\frac{1}{4}$ of Sec. 25, Twp. 21 N., R. 4 W. W. M., inclusive. Distance 11.00 miles.

Duckabush Northerly Section in Jefferson County: Right of way obtained from the SW $\frac{1}{4}$ of SW $\frac{1}{4}$ of Sec. 35, Twp. 26 N., R. 2 W. W. M., to the NW $\frac{1}{4}$ of NW $\frac{1}{4}$ of Sec. 24, Twp. 26 N., R. 2 W. W. M., inclusive, and across the SE $\frac{1}{4}$ of NE $\frac{1}{4}$ of Sec. 14, Twp. 26 N., R. 2 W. W. M. Distance about 3.80 miles.

Humptulips-Quinault Section in Grays Harbor County: Right of way obtained from the NE $\frac{1}{4}$ of SW $\frac{1}{4}$ of Sec. 8, Twp. 20 N., R. 10 W. W. M., to Lot 2 of Sec. 30, Twp. 23 N., R. 9 W. W. M., inclusive. Distance about 17.00 miles.

Quinault Northwest Section in Grays Harbor County: Right of way obtained from Lot 5, Sec. 30, Twp. 23 N., R. 9 W. W. M., to Lot 3, Sec. 16, Twp. 23 N., R. 10 W. W. M., inclusive. Distance 5.5 miles.

PACIFIC HIGHWAY.

Lacey-Nisqually Section Thurston and Pierce Counties: Right of way obtained from the NE $\frac{1}{4}$ of NW $\frac{1}{4}$ of Sec. 20, Twp. 18 N., R. 1 W. W. M., to the NE $\frac{1}{4}$ of NE $\frac{1}{4}$ of Sec. 4, Twp. 18 N., R. 1 E. W. M., inclusive. Distance 9.4 miles.

Orillia-Renton Section in King County: Right of way obtained from the NW $\frac{1}{4}$ of NE $\frac{1}{4}$ in Sec. 19, Twp. 23 N., R. 5 E. W. M., to the NW $\frac{1}{4}$ of NE $\frac{1}{4}$ of Sec. 31, Twp. 23 N., R. 5 E. W. M., inclusive. Distance 2 miles.

Toledo South Section in Lewis and Cowlitz Counties: Right of way obtained from Lot 8, Sec. 19, Twp. 11 N., R. 1 W. W. M., to the NW $\frac{1}{4}$ of SW $\frac{1}{4}$ of Sec. 10, Twp. 10 N., R. 2 W. W. M., inclusive. Distance 7.40 miles.

Kalama North Section in Cowlitz County: Right of way obtained from the SE $\frac{1}{4}$ of NE $\frac{1}{4}$ of Sec. 7, Twp. 6 N., R. 1 W. W. M., to the SE $\frac{1}{4}$ of SW $\frac{1}{4}$ of Sec. 31, Twp. 7 N., R. 1 W. W. M., inclusive. Distance about 2 miles.

Vancouver to LaCenter in Clarke County: Right of way obtained from the SW $\frac{1}{4}$ of SE $\frac{1}{4}$ of Sec. 26, Twp. 3 N., R. 1 E. W. M., to the NE $\frac{1}{4}$ of SE $\frac{1}{4}$ of Sec. 22, Twp. 4 N., R. 1 E. W. M., inclusive. Distance 8.00 miles.

SUNSET HIGHWAY.

Ellensburg-Vantage Section in Kittitas County: Right of way obtained from the SW $\frac{1}{4}$ of SE $\frac{1}{4}$ of Sec. 13, Twp. 17 N., R. 21 E. W. M., to SW $\frac{1}{4}$ of SW $\frac{1}{4}$ of Sec. 17, Twp. 17 N., R. 23 E. W. M., inclusive. Distance 16.90 miles.

Wenatchee-Waterville Section in Douglas County: Right of way obtained from Lot 14, Sec. 5, Twp. 24 N., R. 21 E. W. M., to the NE $\frac{1}{4}$ of SE $\frac{1}{4}$ of Sec. 28, Twp. 25 N., R. 21 E. W. M., inclusive, and from the NW $\frac{1}{4}$ of SW $\frac{1}{4}$ of Sec. 26 to the NW $\frac{1}{4}$ of NE $\frac{1}{4}$ of said Sec. 26, Twp. 25 N., R. 21 E. W. M., inclusive, and from the SE $\frac{1}{4}$ of SE $\frac{1}{4}$ of Sec. 23, Twp. 25 N., R. 21 E. W. M., to the NE $\frac{1}{4}$ of the NW $\frac{1}{4}$ of Sec. 28, Twp. 25 N., R. 22 E. W. M., inclusive. Distance 10.50 miles.

Cle Elum-Easton Section in Kittitas County: Right of way obtained across the SE $\frac{1}{4}$ of NW $\frac{1}{4}$ of Sec. 27, Twp. 20 N., R. 15 E. W. M., and from the N $\frac{1}{2}$ of NW $\frac{1}{4}$ of SW $\frac{1}{4}$ of Sec. 27, Twp. 20 N., R. 15 E. W. M. to the SW $\frac{1}{4}$ of SE $\frac{1}{4}$ of Sec. 30, Twp. 20 N., R. 15 E. W. M., inclusive, and from the NW $\frac{1}{4}$ of NE $\frac{1}{4}$ of Sec. 31, Twp. 20 N., R. 15 E. W. M., to the SW $\frac{1}{4}$ of SW $\frac{1}{4}$ of Sec. 12, Twp. 20 N., R. 13 E. W. M., inclusive. Distance 12.20 miles.

Davenport West Section in Lincoln County: Right of way obtained from the NE $\frac{1}{4}$ of NE $\frac{1}{4}$ of Sec. 29, Twp. 25 N., R. 36 E. W. M., to the SW $\frac{1}{4}$ of NW $\frac{1}{4}$ of Sec. 3, Twp. 25 N., R. 35 E. W. M., inclusive; and from the SW $\frac{1}{4}$ of NW $\frac{1}{4}$ of Sec. 4, Twp. 25 N., R. 35 E. W. M., to the NE $\frac{1}{4}$ of SW $\frac{1}{4}$ of Sec. 14, Twp. 26 N., R. 34 E. W. M., inclusive; also from the NE $\frac{1}{4}$ of NE $\frac{1}{4}$ of Sec. 15, Twp. 26 N., R. 34 E. W. M., to the SW $\frac{1}{4}$ of SE $\frac{1}{4}$ of Sec. 10, Twp. 26 N., R. 34 E. W. M., inclusive. Distance 13.60 miles.

North Bend to Cle Elum: Right of way obtained from the NW $\frac{1}{4}$ of SE $\frac{1}{4}$ of Sec. 14, Twp. 23, N., R. 8 E. W. M., to SW $\frac{1}{4}$ of NW $\frac{1}{4}$ of SW $\frac{1}{4}$ of Sec. 13, Twp. 23 N., R. 8 E. W. M., inclusive; from the SW $\frac{1}{4}$ of SW $\frac{1}{4}$ of Sec. 13, Twp. 23 N., R. 8 E. W. M., to SE $\frac{1}{4}$ of SE $\frac{1}{4}$ of SW $\frac{1}{4}$ of Sec. 13, Twp. 23 N., R. 8 E. W. M., inclusive; across the NW $\frac{1}{4}$ of NE $\frac{1}{4}$ and the NE $\frac{1}{4}$ of NE $\frac{1}{4}$ of Sec. 24, Twp. 23 N., R. 8 E. W. M., inclusive. Distance 1.30 miles.

STATE ROAD NO. 4.

Ferry County: Right of way obtained from the SW $\frac{1}{4}$ of NE $\frac{1}{4}$ of Sec. 3, Twp. 36 N., R. 32 E. W. M., to the SW $\frac{1}{4}$ of NW $\frac{1}{4}$ of Sec. 31, Twp. 37 N., R. 32 E. W. M., inclusive. Distance 2.75 miles.

STATE ROAD NO. 8.

Cooks to Collins Section in Skamania County: Right of way obtained from Lot 2, Sec. 34, Twp. 3 N., R. 9 E. W. M., to SE $\frac{1}{4}$ of SE $\frac{1}{4}$ of Sec. 36, Twp. 3 N., R. 9 E. W. M., inclusive. Distance 3.80 miles.

Type of Guard Rail Used on Sunset Highway, King County.

Switchback on Sunset Highway, near Snoqualmie Pass.

2
1
3
4

STATE ROAD NO. 10.

Okanogan County: Right of way obtained across Lot 1, Sec. 19, Twp. 29 N., R. 24 E. W. M.; also from the NE $\frac{1}{4}$ of NW $\frac{1}{4}$ of Sec. 19, Twp. 29 N., R. 24 E. W. M., to the NE $\frac{1}{4}$ of SW $\frac{1}{4}$ of Sec. 18, Twp. 29 N., R. 24 E. W. M., inclusive. Distance 1.00 mile.

STATE ROAD NO. 18.

Lewis County: Right of way obtained from the SW $\frac{1}{4}$ of SE $\frac{1}{4}$ of Sec. 7, Twp. 12 N., R. 5 E. W. M., to NW $\frac{1}{4}$ of NW $\frac{1}{4}$ of Sec. 17, Twp. 12 N., R. 5 E. W. M., inclusive; also from NE $\frac{1}{4}$ of SW $\frac{1}{4}$ of Sec. 17, Twp. 12 N., R. 5 E. W. M., to SW $\frac{1}{4}$ of NE $\frac{1}{4}$ of Sec. 28, Twp. 12 N., R. 5 E. W. M., inclusive. Distance 3.90 miles.

STATE ROAD NO. 19.

Pacific County: Right of way obtained from SW $\frac{1}{4}$ of NE $\frac{1}{4}$ of Sec. 31, Twp. 11 N., R. 9 W. W. M., to NE $\frac{1}{4}$ of SW $\frac{1}{4}$ of Sec. 4, Twp. 10 N., R. 10 W. W. M., inclusive. Distance 0.80 miles.

STATE ROAD NO. 23.

Right of way obtained from the SE $\frac{1}{4}$ of SW $\frac{1}{4}$ of Sec. 27, Twp. 31 N., R. 45 E. W. M., to S $\frac{1}{2}$ of NE $\frac{1}{4}$ of Section 10, Twp. 30 N., R. 44 E. W. M., inclusive; from N $\frac{1}{2}$ of SW $\frac{1}{4}$ of Sec. 10, Twp. 30 N., R. 44 E. W. M., to NE $\frac{1}{4}$ of SW $\frac{1}{4}$ of Sec. 26, Twp. 30 N., R. 43 E. W. M., inclusive; from NW $\frac{1}{4}$ of Sec. 35, Twp. 30 N., R. 43 E. W. M., to SW $\frac{1}{4}$ of SW $\frac{1}{4}$ of Sec. 14, Twp. 28 N., R. 43 E. W. M., inclusive; from N $\frac{1}{2}$ of SE $\frac{1}{4}$ of Sec. 27, Twp. 28 N., R. 43 E. W. M., to W $\frac{1}{2}$ of SE $\frac{1}{4}$ of Sec. 3, Twp. 27 N., R. 43 E. W. M., inclusive; across the W $\frac{1}{2}$ of SE $\frac{1}{4}$ of Sec. 10, Twp. 27 N., R. 43 E. W. M.; also from the NW $\frac{1}{4}$ of SE $\frac{1}{4}$ of Sec. 15, Twp. 27 N., R. 43 E. W. M., to S $\frac{1}{2}$ of SE $\frac{1}{4}$ of Sec. 3, Twp. 26 N., R. 43 E. W. M., inclusive. Distance 32.00 miles.

The right of way for the state highways was all secured without cost to the state except where property was actually damaged and claims allowed as follows:

Central Washington Highway.....	Adams and Lincoln counties.....	\$600 00
Inland Empire Highway.....	Benton County	13 25
	Stevens County	350 00
	Walla Walla County.....	1,542 65
	Whitman County	1,334 56
National Park Highway.....	Pacific County	90 80
	Lewis County	1,244 91
	Pierce County	630 20
Olympic Highway.....	Thurston County	2,025 04
	Grays Harbor County.....	104 65
	Mason County	1,198 04
Pacific Highway.....	Cowlitz County	380 40
	Thurston County	2,428 63
Sunset Highway.....	Kittitas County	507 90
	King County	619 59
	Douglas County	250 00
	Lincoln County	280 00
State Road No. 4.....	Ferry County	260 00
State Road No. 8.....	Skamania County	700 00
State Road No. 10.....	Okanogan County	70 00
State Road No. 12.....	Okanogan County	139 50
State Road No. 23.....	Spokane and Pend Oreille counties.	1,574 35
Total.....		\$16,344 47

Where condemnation cases were instituted the costs of conducting are included in the amounts shown above.

In securing rights of way for the state highways, right at the outset this department adopted the policy of instituting condemnation suits to obtain right of way from property owners, who in our opinion asked exorbitant sums—sums that were far in excess of the actual value of the land and the damages, if any, and disregarded the benefits accruing to the property by reason of the construction of a state highway. This policy has redounded not only to the benefit of the state in reducing the cost of its highways, but has conferred a similar benefit on nearly every county in the state in securing rights of way for its own county roads, independent of the State Highway Department. In the past, the counties with few exceptions, having no special right of way agents of their own, and being compelled to turn that feature of the work to their county engineers or county commissioners, have been compelled to pay big sums for rights of way for their county roads, rights of way that really should have been cheerfully donated, as the construction of the road was a decided improvement in the district and a greater

benefit to the property owner than the value of the strip of land taken. And because these large sums were allowed by the counties for rights of way, bad precedents were established and it came to be a general practice for the property owner to demand an exorbitant sum for the land desired as right of way from the state as well as from the counties. Our policy, in the securing of right of way desired has been to pay the difference between the actual market value of the land taken plus the damages, if any, and the benefits that would accrue to the adjoining property by reason of the construction of a state highway. We have been willing at all times to pay every property owner the actual amount of damages he sustained, but whenever we thought the amount demanded was exorbitant and unreasonable, we have immediately started condemnation proceedings. It is interesting to note that in every instance where a condemnation suit has been tried, the verdict awarded by the jury was far less than the amount asked for the property originally, confirming the contention of the department that the sum first asked was exorbitant. The result is that we are overcoming the bad precedent established in previous years, and, while acquiring rights of way for the state at amounts covering the actual damage to the property owner, we are making it possible for the counties of the state to make similar reductions in the cost of rights of way for their county roads.

In connection with this matter we desire to extend our sincere thanks to the officials of all the counties of the state for the courteous treatment, co-operation and generous assistance to this department in the securing of rights of way for state highways. Without such assistance and co-operation it would have been utterly impossible to have accomplished these results.

TABLE SHOWING AMOUNTS OF APPROPRIATIONS, AMOUNTS EXPENDED, AND AMOUNTS REVERTING ON STATE ROADS AND BRIDGES FROM APRIL 1, 1905, TO SEPT. 30, 1916.

	Total Original Appropriations Apr. 1, 1905, to Mar. 31, 1913	Total Revert Not Reappropriated Mar. 31, 1913	Expended by State Apr. 1, 1905, to Mar. 31, 1913	Appropriations 1913	Expended Apr. 1, 1915	Balance Reverting	Appropriations 1915	Expended to Sept. 30, 1916	Total Original Appropriations	Total Expended by State Apr. 1, 1905, to Sept. 30, 1916
PRIMARY HIGHWAYS—										
Central Washington										
Inland Empire										
McClellan Pass	\$123,939 84	\$11,078 06	\$112,890 79	\$339,067 00	\$337,397 68	\$11,669 32	\$248,575 32	\$338,301 93	\$334,086 00	\$338,301 93
National Park	25,000 00		25,000 00	149,074 00	144,541 25	4,532 75	147,909 75	218,976 41	557,642 32	546,574 09
Olympic	147,500 00	5,960 20	141,539 80	98,834 00	94,003 97	4,835 03	* 153,615 76	112,939 74	490,962 59	370,571 78
Pacific	31,000 00	6,003 77	24,996 23	161,605 26	161,490 65	124 61	192,604 96	110,050 13	277,449 76	229,069 10
Sunset	157,000 00	7,010 61	149,989 39	249,703 00	249,573 80	129 20	473,989 00	177,631 90	501,710 22	490,632 35
Preliminary surveys				473,513 00	396,833 42	82,119 58	303,266 58	363,183 18	764,097 00	637,763 21
Examination of bridge sites				20,000 00	19,997 73	2 27		256,844 50	943,779 58	803,227 81
Maintenance				3,461 00	917 55	2,543 45			20,000 00	19,997 73
Maintenance, west side				86,369 00	71,434 14	15,434 86	68,879 77	49,969 93	130,343 77	121,454 12
Maintenance, east side							99,760 00	96,329 13	99,760 00	96,329 13
Total primary highways	\$434,468 84	\$30,052 63	\$454,416 21	\$1,537,231 26	\$1,405,300 19	\$121,431 07	\$1,317,134 14	\$1,469,639 32	\$3,833,534 24	\$3,339,855 72
SECONDARY HIGHWAYS—										
State Road No. 4	\$33,190 00	\$3,492 10	\$29,697 90	\$17,303 00	\$17,242 00	\$34 00	\$29,513 00	\$29,181 37	\$30,014 00	\$76,121 27
State Road No. 5	96,274 53	4,535 56	90,738 97	25,960 00	23,539 65	2,370 35	2,870 35	2,367 90	123,604 33	116,693 52
State Road No. 8	111,646 72	6,316 30	105,330 42	60,000 00	47,633 01	12,367 99	67,311 99	65,102 14	233,963 71	213,070 57
State Road No. 10	36,037 50	1,399 33	34,638 17	31,012 00	30,325 32	136 18	49,000 00	31,177 93	116,049 50	96,641 32
State Road No. 11	79,000 00	53,230 24	25,769 76	5,000 00	5,000 00		5,000 00	4,875 05	36,000 00	35,594 31
State Road No. 12	48,678 93	3,440 91	45,238 02	8,633 00	8,599 31	53 19	29,571 19	29,137 63	36,903 17	33,975 56
State Road No. 15	15,000 00	131 00	14,869 00						15,000 00	14,819 00
State Road No. 16	25,000 00	41 27	24,958 73						25,000 00	24,958 73
State Road No. 17	30,000 00	19,541 73							30,000 00	24,458 26

STATUS OF STATE HIGHWAY CONTRACTS, 1915-1916.

Cont. No.	SECTION OF HIGHWAY	COUNTY	Miles	KIND OF IMPROVEMENT
	CENTRAL WASH. HIGHWAY—			
263	Ritzville to Sprague.....	Adams and Lincoln.	23.75	Grading and one 20-ft. arch bridge.
	INLAND EMPIRE HIGHWAY—			
234	Ellensburg to North Yakima.....	Yakima and Kittitas.	1.8	Grading
260	Kiona to Richland.....	Benton.....	11.6	Grading and bridges
261	Wallula to Touchet.....	Walla Walla..	9.55	Grading and bridges
256	Walla Walla northeasterly.....	Walla Walla and Columbia	6.77	Grading
225	Colfax south	Whitman.....	5.5	Grading and 40-ft. conc. arch
227	Colfax north (Steptoe-Cashup)....	Whitman.....	4.0	Grading
246	Colville south	Stevens.....	5.0	Grading
250	Union Flat Creek south.....	Whitman.....	3.2	Grading
255	Colfax to Rosalia.....	Whitman.....	17.3	Surfacing (gravel)
270	Colville south	Stevens.....	4.6	Surfacing (gravel)
271	Spangle north	Spokane.....	6.8	Surfacing (gravel)
277	Arden bridge	Stevens.....	.....	One reinf. concrete bridge
	SECOND DIVISION—			
262	Rosalia to Oakesdale.....	Whitman.....	8.9	Grading
259	Pullman south	Whitman.....	8.7	Grading
	MCLELLAN PASS HIGHWAY—			
216	Enumclaw to Greenwater river....	King.....	13.5	Surfacing (gravel)
265	Greenwater river east.....	Pierce.....	8.5	Grading
.....	Greenwater to Summit.....	Pierce.....	.....	.....
249	Naches to Summit.....	Yakima.....	14.0	Grading
	NATIONAL PARK HIGHWAY—			
243	Mashel bridge.....	Pierce.....	.....	One 80-ft. concrete arch
226	Approaches to Mashel bridge.....	Pierce.....	1.5	Grading
215	Alder to Elbe.....	Pierce.....	5.0	Surfacing (gravel)
214 a	Mineral to Morton.....	Lewis.....	6.0	Grading
258	Mineral to E. Fork Tilton river...	Lewis.....	10.0	Gravel
237	Mayfield bridge	Lewis.....	.....	468-ft. cantilever bridge
252	Nemah to Nasel river.....	Pacific.....	7.0	Grading
274	Bear river west.....	Pacific.....	3.3	Grading
204	Bear river west (old const.).....	Pacific.....	1.8	Grading
251	Frances to Ashlock.....	Pacific.....	4.2	Surfacing (crushed rock)
.....	Mashel bridge approaches.....	Pierce.....	1.5	Grading and surfacing
	OLYMPIC HIGHWAY—			
245	Mud Bay to McCleary.....	Thurston.....	7.75	Grading
212	Shelton to Quilcene (a).....	Mason and Jefferson.	11.9	Grading and surfacing
248	Skokomish river bridge.....	Mason.....	.....	195-ft. riveted Petit truss
220	East Beach to Piedmont.....	Clallam.....	3.0	Grading
258	Lake Quinalt northwesterly.....	Grays Harbor	10.5	Clearing and grubbing
221	Shelton to Quilcene (b)	Jefferson.....	2.5	Grading and graveling

STATUS OF STATE HIGHWAY CONTRACTS, 1915-1916—Continued.

Cont. No.	CONTRACTOR				
CENTRAL WASH. HIGHWAY—					
208	Mitchell Bros., Spokane.....	\$40,589 82	Jan. 27, 1916	July 1, 1916	Sept. 1, 1916
INLAND EMPIRE HIGHWAY—					
234	Quigg Const. Co.....	4,417 90	June 18, 1915	Sept. 1, 1915	Aug. 27, 1915
239	H. L. Wilson Co.....	20,879 97	Dec. 28, 1915	June 15, 1916	Aug. 26, 1916
261	H. L. Wilson Co.....	27,880 92	Dec. 28, 1915	June 15, 1916	Sept. 2, 1916
258	General Const. Co.....	17,923 09	Oct. 18, 1915	Apr. 1, 1916	June 1, 1916
225	H. L. Wilson Co.....	22,105 75	May 27, 1915	Oct. 1, 1915	Dec. 27, 1915
227	General Const. Co.....	13,351 49	June 2, 1915	Sept. 1, 1915	Aug. 11, 1915
249	E. D. Miner, Colville, Wash..	21,728 19	Aug. 10, 1915	Dec. 1, 1915	Apr. 29, 1916
250	H. O. Root, Spokane, Wash....	11,825 40	Sept. 2, 1915	Dec. 1, 1915	Dec. 7, 1915
255	W. G. Mulligan Co., Spokane...	14,880 54	Oct. 18, 1915	Mar. 1, 1916	Oct. 8, 1916
270	H. O. Root, Spokane.....	2,208 27	May 27, 1916	Sept. 1, 1916	July 24, 1916
271	J. E. Cunningham.....	7,243 56	June 19, 1916	Dec. 1, 1916	Oct. 9, 1916
277	Acorn & Son.....		Sept. 12, 1916	Nov. 15, 1916	
SECOND DIVISION—					
282	General Const. Co.....	22,014 88	Dec. 27, 1915	June 15, 1916	Oct. 11, 1916
289	G. L. Stickler, Davenport.....	22,509 25	Dec. 27, 1915	June 15, 1916	Aug. 15, 1916
McOLELLAN PASS HIGHWAY—					
216	State Force (Ausfahl).....	26,000 00	Mar. 21, 1915	Aug. 1, 1915	Aug. 1, 1915
205	Sloane Bros., Seattle.....		Jan. 24, 1916	Oct. 1, 1916	
249	Rajotte, Robert & Winters.....	47,115 18	Aug. 17, 1915	Jan. 1, 1916	June 29, 1916
NATIONAL PARK HIGHWAY—					
243	H. O. Malott, Seattle.....	9,901 91	July 21, 1915	Nov. 1, 1915	May 25, 1916
226	Kendle & Eppler, Eatonville....	22,967 25	June 4, 1915	Oct. 1, 1915	May 31, 1916
215	State Force (Thompson).....	8,645 63	Apr. 6, 1915	Oct. 7, 1915	Sept. 1, 1916
214 a	State Force (Mills).....	42,690 00	Mar. 31, 1915	Sept. 10, 1915	Oct. 7, 1915
258	Torger Peterson, Eatonville....	19,761 30	Sept. 2, 1915	Jan. 1, 1916	Nov. 20, 1915
257	N. H. Bear, Portland.....	29,006 50	June 22, 1915	Dec. 1, 1915	Jan. 17, 1916
252	Burnett Const. Co.....		Sept. 9, 1915	Sept. 1, 1916	
274	M. P. Zindorf, Seattle.....		Aug. 15, 1916	Apr. 20, 1917	
264	Raymond Const. Co.....	9,708 70	July 23, 1914	Nov. 1, 1914	July 29, 1915
251	E. L. Goulter, Seaview.....	2,758 25	Sept. 8, 1915	Oct. 15, 1915	Jan. 3, 1916
.....	State Force (Jorgensen).....	3,458 84	May 19, 1916		July 29, 1916
OLYMPIC HIGHWAY—					
245	Rignell & Bankston.....	34,301 55	July 27, 1915	Jan. 1, 1916	Feb. 1, 1916
212	David Govan, Sup't.....	56,698 27	Mar. 29, 1915		Dec. 11, 1915
248	Yelverton & Wolf.....		Aug. 14, 1915	Feb. 1, 1916	
230	State & Co. Force (Hugh Govan)	9,542 00	May 12, 1915		Aug. 21, 1915
259	State Force (Sparger).....		June 1, 1915		
221	State Force (Coyne).....	29,669 16	June 23, 1915	Sept. 10, 1915	Sept. 13, 1915

STATUS OF STATE HIGHWAY CONTRACTS, 1915-1916—Continued.

Cont. No.	SECTION OF HIGHWAY	COUNTY	Miles	KIND OF IMPROVEMENT
PACIFIC HIGHWAY—				
223	Blaine to Ouster.....	Whatcom.....	3.0	Graveling
247	Ouster to Enterprise.....	Whatcom.....	2.75	Grading
217	Waterfront road	Whatcom } and Skagit }	11.00	Grading and bridging
273	Orillia to Renton.....	King.....	2.00	Grading
228	Lacey to Nisqually.....	Thurston.....	8.0	Grading
218	Lacey to Nisqually.....	Pierce.....	0.5	Grading
231	Toledo south	Lewis and Cowlitz.	6.0	Grading
269	Toledo south	Lewis and Cowlitz.	7.7	Surfacing (gravel)
222	Carrollton north	Cowlitz.....	2.0	Surfacing (rock)
229	Kalama north	Cowlitz.....	1.53	Grading
.....	Kalama north	Cowlitz.....	1.5	Surfacing (crushed rock)
224	Kalama south	Cowlitz.....	3.3	Surfacing (crushed rock)
232	Woodland to LaCenter.....	Clarke.....	2.0	Surfacing (crushed rock)
241	LaCenter north	Clarke.....	1.0	Grading and surfacing (crushed rock).
233	Vancouver to LaCenter.....	Clarke.....	7.5	Grading
242	Marysville south	Snohomish....	3.33	Grading and surfacing
257	Nisqually east	Pierce.....	2.30	Grading and surfacing (gravel)
.....	Lacey to Nisqually.....	Thurston and Pierce.	9.5	Surfacing (gravel)
272	Vancouver north	Clarke.....	2.0	Surfacing (gravel)
SUNSET HIGHWAY—				
213	North Bend to Easton.....	King and Kittitas.	21.9	Surfacing (gravel)
211	North Bend to Easton.....	King and Kittitas.	7.0	Surfacing (gravel)
266	Wenatchee to Orondo.....	Douglas.....	11.1	Surfacing (gravel)
268	Ellensburg to Wenatchee.....	Kittitas.....	10.0	Grading
230	Rocklyn to Oreston.....	Lincoln.....	14.5	Grading
240	Near Waterville	Douglas.....	.....	Maintenance
219	Ooberly Canyon	Douglas.....	5.0	Grading
254	Easton to Ole Elum.....	Kittitas.....	13.5	Grading
257	Easton to Ole Elum.....	Kittitas.....	.....	Bridges—2 100', 2 65', 1 50', 1 30' arches.
.....	Ellensburg to Vantage.....	Kittitas... ..	3.5	Grading
STATE ROADS—				
239	No. 4	Ferry.....	27.0	Grading
.....	No. 5 (Nesika bridge).....	Lewis.....	1.0	Grading and surfacing
254	No. 8, Collins to Cook.....	Skamania.....	2.0	Grading
236	No. 8, Stevenson west.....	Skamania.....	2.3	Grading
.....	No. 10	Chelan.....	2.0	Grading and gravel
235 a	No. 10	Okanogan....	13.5	Grading
238	No. 11	Skagit.....	2.0	Grading and 1 80' Howe truss
235 b	No. 12	Okanogan....	19.5	Grading
214 b	No. 18, Morton to Kosmos.....	Lewis.....	5.0	Grading
244	No. 23, Mead to Newport.....	Spokane and Pend Oreille.	34.5	Grading and 1 70', 1 80' con- crete arches.

STATUS OF STATE HIGHWAY CONTRACTS, 1915-1916—Continued.

Cont. No.	CONTRACTOR	Final Estimate	Date of Contract	Date for Completion	Date Completed
PACIFIC HIGHWAY—					
223	Worthen & Satterthwaite.....	\$6,445 70	May 6, 1915	Aug. 1, 1915	Sept. 30, 1915
247	Ohas. E. Lind.....	12,169 94	July 26, 1915	Dec. 1, 1915	Feb. 15, 1916
217	State Force (Murchison).....	104,881 88	May 3, 1915	.....	Oct. 31, 1915
273	M. P. Zindorf, Seattle.....	.....	Aug. 10, 1916	Nov. 15, 1916	.....
238	L. H. Goerig.....	20,466 82	June 3, 1915	Oct. 1, 1915	Nov. 6, 1915
218	N. P. Ry. Co. (McLeod).....	3,561 75	May 10, 1915	.....	June 18, 1915
231	Andrew & Harrer.....	20,567 26	June 9, 1915	Oct. 15, 1915	Oct. 20, 1915
269	Jarvis & Burkheimer, Inc.....	.....	Mar. 23, 1916	Sept. 1, 1916	.....
222	Montague & O'Reilly Co.....	6,193 50	May 6, 1915	July 1, 1915	July 1, 1915
229	Hendricks & Ward.....	8,066 47	June 9, 1915	Aug. 15, 1915	Aug. 12, 1915
.....	Porter & Conley, Force Acct.....	5,749 74	Aug. 12, 1915	.....	Sept. 16, 1915
224	Porter & Conley.....	12,534 07	May 6, 1915	Sept. 1, 1915	Aug. 13, 1915
232	Porter & Conley.....	8,778 83	June 14, 1915	Sept. 1, 1915	July 14, 1915
241	Force Acct. (Gen'l Const. Co.)..	11,400 19	July 19, 1915	Oct. 2, 1915	Oct. 2, 1915
233	General Constr. Co.....	37,108 57	June 19, 1915	Nov. 1, 1915	Sept. 16, 1915
242	State Force (Jorgensen).....	16,187 34	July 26, 1915	Nov. 9, 1915	Nov. 9, 1915
257	State Force (Jorgensen).....	7,420 18	Nov. 9, 1915	.....	Apr. 9, 1916
.....	State Force (Weller).....	4,656 90	Sept. 7, 1915	.....	Nov. 15, 1915
272	L. F. Kline.....	4,266 86	July 31, 1916	Sept. 15, 1916	Sept. 30, 1916
SUNSET HIGHWAY—					
213	State Force (Jordan).....	81,888 00	Mar. 30, 1915	.....	.....
211	State Force (Jorgensen).....		Dec. 14, 1914	July 29, 1915	July 29, 1915
266	S. G. Kinder, Bridgeport.....	7,999 83	Jan. 23, 1916	June 1, 1916	July 25, 1916
268	Martin Holm, Ellensburg.....	.....	Mar. 1, 1916	Aug. 1, 1916	.....
230	Mohr Const. Co.....	49,946 22	June 10, 1915	Nov. 1, 1915	Apr. 24, 1916
240	State Force (Foster).....	320 10	Apr. 20, 1915	.....	July 1, 1915
219	Honor Camp (Bowen).....	55,484 42	May 12, 1915	.....	.....
264	General Const. Co.....	.....	Jan. 27, 1916	July 1, 1916	.....
267	Security Bridge Co.....	.....	Jan. 31, 1916	Oct. 1, 1916	.....
.....	State Force (Jordan).....	5,364 47	May 1, 1916	.....	Sept. 14, 1916
STATE ROADS—					
239	State Force (Richardson).....	.....	Apr. 23, 1915	.....	.....
.....	State Force	2,367 90	.....	.....	Oct. 23, 1915
254	State Force (Murchison).....	41,071 87	Oct. 16, 1915	.....	Mar. 18, 1916
236	State Force (Gillis).....	21,047 04	May 6, 1915	.....	Sept. 14, 1915
.....
235 a	State Force (Boetzkes).....	23,723 17	June 25, 1915	.....	Sept. 30, 1915
233	State Force (Strong).....	4,375 06	June 15, 1915	.....	Aug. 13, 1915
235 b	State Force (Boetzkes).....	23,618 78	June 25, 1915	.....	Sept. 30, 1915
214 b	State Force (Mills).....	19,685 00	Mar. 31, 1915	Oct. 1, 1915	Sept. 13, 1915
244	General Const. Co.....	91,327 32	July 23, 1915	Jan. 1, 1916	Apr. 22, 1916

CONTRACT UNIT PRICES ON STATE ROADS, APRIL, 1915, TO SEPTEMBER, 1916

Contract No.	Highway	County	Contractor
218	Pacific-Lacey to Nisqually	Pierce	Northern Pacific Ry. Co.
222	Pacific-Carrollton north	Cowlitz	Montague & O'Reilly Co.
223	Pacific-Blaine to Ouster	Whatcom	Worthen & Satterthwaite
224	Pacific-Kalama south	Cowlitz	Porter & Conley
225		Whitman	H. L. Wilson Co.
226		Pierce	Kendle & Eppler
227	Maskel bridge	Whitman	General Construction Co.
228		Thurston	L. H. Goerig
229	Pacific-Kalama north	Cowlitz	Hendricks & Ward
230	Sunset-Rocklyn to Creston	Lincoln	Mohr Construction Co.
231	Pacific-Toledo south	Lewis and Cowlitz	Andrew & Harner
232		Clarke	Porter & Conley
233		Clarke	General Construction Co.
234		Kittitas and Yakima	Quigg Construction Co.
237	Yakima	Lewis	N. H. Beer
243		Pierce	H. O. Malott
244		Spokane and Pend Oreille	General Construction Co.
245		Thurston	Rignell & Bankston
246		Stevens	E. D. Miner
247		Whatcom	Chas. E. Lind
248		Mason	Yelverton & Wolf
249		Yakima	Rajotte, Robert & Winters
250		Whitman	H. O. Root
251		Pacific	K. L. Goulet
252		Lewis	Burnett Construction Co.
253	n river	Whitman	Torger Peterson
255		Walla Walla and Columbia	W. G. Mulligan Co.
256		Columbia	General Construction Co.
259	Second Division-Pullman south	Whitman	G. L. Stiecker
260	Inland	Benton	H. L. Wilson Co.
261	Inland	Walla Walla	H. L. Wilson Co.
262	Touchet	Whitman	General Construction Co.
263	Oakesdale	Adams and Lincoln	Mitchell Brothers
264	e to Sprague		

CONTRACT UNIT PRICES ON STATE ROADS, APRIL, 1915, TO SEPTEMBER, 1916—Continued.

Contract No.	HIGHWAY	COUNTY	KIND OF IMPROVEMENT	CONTRACTOR
264	Sunset—Ole Elum to Easton.....	Kittitas.....	Grading.....	General Construction Co.
265	McClellan Pass—Greenwater river east.....	Pierce.....	Grading.....	Gleason Bros.
266	Sunset—Wenatchee to Orondo.....	Douglas.....	Surfacing.....	S. G. Kinder
267	Sunset—Ole Elum to Easton.....	Kittitas.....	Reinforced concrete bridges.....	Security Bridge Co.
268	.....	Kittitas.....	Grading.....	Martin Holm
269	.....	Lewis and Cowlitz.....	Surfacing.....	Jarvis & Burkholder
270	.....	Stevens.....	Surfacing.....	H. O. Root
271	.....	Spokane.....	Surfacing.....	J. E. Cunningham
272	.....	Clarke.....	Surfacing.....	L. F. Kline
273	.....	King.....	Grading.....	M. P. Zindorf
277	.....	Stevens.....	Reinforced concrete bridge.....	Acorn & Son

CONTRACT UNIT PRICES ON STATE ROADS, APRIL, 1915, TO SEPTEMBER, 1916--Continued.

Contract Number	Clearing	Grubbing	EXCAVATION Including Haul of 400 feet			Overhaul, per each 100 feet	Rip Rap, Hand Placed	Slope Walls	Concrete, 1st Class	Concrete, 2nd Class	Structural Steel Shapes in Place	Reinforcing Steel in Place	Expanded Metal in Place	Pipe Rail in Place	Guard Rail in Place	Pole Rail in Place	Timber and Plank in Place, Including Spikes and Bolts	Orbting Logs in Place	Oulvert Logs in Place	Logs for Bridge Stringers	Rubble Masonry	Chicken Wire	Side Surfacing
			Common	Loose Rock	Solid Rock																		
218																							
222																							
223																							
224																							
225																							
226	\$100.00	\$150.00	.20	\$0.45	\$0.95	\$0.014	\$2.50	\$2.50	\$12.50	\$11.50	\$0.04	\$0.04	\$0.08	\$0.75	\$0.30		\$80.00	\$0.25			\$5.00	\$0.02	
227			.25			.014	2.00		15.00	12.00					.024		25.00						
227			.17	.70	1.75	.014	2.00		12.25	11.00	.054	.054	.06	.65	.25		35.00				5.00	.08	
228	100.00	100.00	.24			.014	4.00		12.00	11.00		.06			.10		20.00						
229	90.00	120.00	.23	.40	.75	.06	8.00	5.00	15.00	14.00		.10			.50		25.00						
230	8.00		.19	.45	.85	.024	1.00	2.75	10.00	9.50		.04			.20		80.00			6.00			
231	80.00	140.00	.26			.02	4.00		16.50	15.50		.06			.30		28.00						
232																							
233	125.00	185.00	.194	.60	1.40	.02	5.00		15.75	14.50	.06	.06	.07	.80	.30		85.00					.08	
234			.30	.25	1.00	.08	8.00	4.25	18.00	16.00					.25		88.00			8.00			
244			.20	.70	.95	.014	2.50	8.50	13.25	11.75	.06	.06	.07	.70	.25		85.00	.30		6.00		.08	\$0.08
245	100.00	125.00	.24	.40	.80	.02	6.00	6.00	8.00	6.00		.06			.06		85.00	.14	\$0.10				
246			.17	.40	.90	.01	2.50	5.00	12.00	11.00		.054			.40								
247	90.00	90.00	.24	1.00	1.00	.01	3.00	3.00	16.00	14.00	.06	.06	.06	1.50	.40		24.00	.25				.02	
249	50.00	50.00	.18	.30	.80	.01	1.00	1.00	15.00	12.50	.06	.06	.06		.50		40.00			2.50			

CONTRACT PRICES ON STATE BRIDGES, APRIL, 1915, TO SEPTEMBER 30, 1916.

Contract No.	STREAM CROSSED	BRIDGES	Contract Price	EXTRA CONCRETE		Final Estimate	Date Completed
				1st Class	2nd Class		
225	Rebel Flat creek.....	One 40-ft. concrete arch.....	\$2,065 00	\$13 00	.....	\$2,165 00	Dec. 27, 1915
237	Cowlitz river.....	469-ft. cantilever.....	28,888 00	.....	.....	29,006 50	Jan. 17, 1916
243	Mashel river.....	One 80-ft. concrete arch.....	7,850 00	15 00	\$14 00	9,901 91	May 25, 1916
244a	Little Spokane river.....	One 70-ft. concrete arch.....	2,730 00	.....	.....	2,777 50	Apr. 22, 1916
244b	Little Spokane river.....	One 75-ft. concrete arch.....	3,455 00	.....	.....	3,610 00	Apr. 22, 1916
248	Skokomish river.....	195-ft. riveted Petit truss.....	11,253 31	.....	.....	.....	Not completed
259	Oreek.....	One 40-ft. concrete arch.....	2,000 00	10 00	.....	2,500 00	Aug. 15, 1916
260	Kennewick canal.....	One 45-ft. concrete arch.....	1,987 00	13 50	.....	1,987 00	Aug. 1, 1916
261	Nine Mile creek.....	One 45-ft. concrete arch.....	1,771 00	18 00	.....	2,086 00	Sept. 2, 1916
263	Cow creek.....	One 20-ft. concrete arch.....	1,275 00	15 00	.....	.....	Sept. 1, 1916
267a	Yakima river.....	Two 100-ft. concrete arches.....	11,788 00	12 50	.....	.....	Not completed
267b	Cle Elum river.....	Two 65-ft. concrete arches.....	5,890 00	12 50	.....	.....	Not completed
267c	Little creek.....	One 30-ft. concrete arch.....	2,792 00	12 50	.....	.....	Not completed
267d	Big creek.....	One 50-ft. concrete arch.....	2,760 00	12 50	.....	.....	Not completed
277	Little Pend Oreille river.....	Two 30-ft. spans, T-beam bridge.....	4,434 67	14 00	12 50	.....	Not completed

FINANCIAL STATEMENT, PUBLIC HIGHWAY FUND.

	Appropriated for Biennium Ending March 31, 1917	Total Expended	Balance Oct. 1, 1916
Salary of Commissioner.....	\$10,000 00	\$7,446 23	\$2,553 77
Salaries of engineers and other employes....	39,600 00	29,128 40	10,471 60
Office expense, postage, engineers' instru- ments, traveling expense and primary surveys	20,000 00	16,073 43	3,926 57
Printing	2,500 00	1,343 75	1,156 25
Judgment, J. M. Noble.....	1,722 29	1,722 29	.....
Judgment, Peter Hunley.....	54 96	.....	54 96
Relief W. J. McIntyre.....	18 40	18 40	.....
Redemption and interest, Wenatchee bridge bonds	30,490 00	17,240 00	13,240 00
Skagit river bridge.....	1,818 71	1,049 22	269 49
Lewiston-Clarkston bridge	35,000 00	33,145 87	1,854 13
Mashel bridge	*39,664 59	39,664 59	.....
Mayfield bridge	*30,241 50	30,241 50	.....
Central Washington Highway—			
Ritzville northerly	59,086 00	38,301 88	20,734 12
Pasco northerly	25,000 00	.....	25,000 00
Inland Empire Highway—			
Kennewick westerly	34,336 00	27,067 61	7,248 39
Ellensburg to North Yakima.....	10,000 00	9,386 48	613 52
Colville south	29,518 00	21,301 86	8,216 14
Walla Walla westerly.....	2,131 92	2,131 92	.....
Walla Walla westerly.....	29,518 00	29,496 51	21 49
Walla Walla northeasterly.....	3,391 57	3,391 57	.....
Walla Walla northeasterly.....	29,518 00	22,965 64	6,552 36
Spokane southerly	3,076 74	3,076 74	.....
Colfax north and south.....	3,069 09	3,069 09	.....
Colfax north and south.....	47,008 00	47,008 00	.....
Rosalia south	27,008 00	20,682 91	6,325 09
Pullman to Idaho.....	30,000 00	29,378 08	621 92
Maintenance, north of Snake river.....	1,096 72	1,096 72	.....
Maintenance, south of Snake river.....	2,630 31	2,630 31	.....
McClellan Pass Highway—			
Enumclaw to Rainier National Park....	4,198 64	4,198 64	.....
Natches to Rainier National Park.....	334 11	334 11	.....
Enumclaw to summit of Cascades.....	36,027 00	51,067 69	34,969 31
North Yakima to summit of Cascades..	57,350 00	57,339 30	10 70
National Park Highway—			
Ceres to ocean.....	4,821 85	4,821 85	.....
Nemah to ocean.....	72,000 00	29,787 74	42,212 26
Alder to Elbe.....	10,000 00	8,646 63	1,353 37
Mineral to Morton.....	66,798 91	66,798 91	.....
Olympic Highway—			
Mud Bay to McCleary.....	38,500 00	38,500 00	.....
Near Lake Quinalt.....	48,175 00	39,292 96	8,882 06
Shelton to Quilcene.....	96,250 00	90,297 52	5,952 48
Lake Crescent	9,625 00	9,541 43	83 57
Pacific Highway—			
Toledo to Vancouver.....	192,500 00	167,352 08	25,147 97
Renton to Kent.....	34,387 00	2,008 44	32,378 56
Olympia to Tacoma.....	49,125 00	46,450 71	2,674 29
North of King county line.....	147,377 00	147,377 00	.....
North of King county line.....	50,000 00	.....	50,000 00
Sunset Highway—			
North Bend to Cle Elum.....	31,853 59	31,853 59	.....
North Bend to Cle Elum.....	78,600 00	35,209 33	43,390 67
Ellensburg to Wenatchee.....	29,475 00	23,074 96	6,400 04
Douglas county	59,036 00	57,404 53	1,631 42
Lincoln county	59,036 00	59,036 00	.....
Reardan westerly	265 99	265 99	.....
Maintenance—Wenatchee to Idaho state line	411 18	411 18	.....
Maintenance—Wenatchee to Renton.....	9,241 56	9,241 56	.....

FINANCIAL STATEMENT, PUBLIC HIGHWAY FUND—Continued.

	Appropriated for Biennium Ending March 31, 1917	Total Expended	Balance Oct. 1, 1916
State Road No. 4—Ferry county	\$29,518 00	\$29,181 87	\$336 63
State Road No. 5—Cowlitz River bridge....	2,870 85	2,867 90	2 45
State Road No. 8—Skamania county	12,861 99	12,861 99	.....
State Road No. 8—Skamania county	54,960 00	52,740 15	2,209 85
State Road No. 10—Chelan county	20,000 00	1,488 54	18,511 46
State Road No. 10—Okanogan county	186 18	178 61	12 57
State Road No. 10—Okanogan county	29,518 00	29,515 73	2 27
State Road No. 11—Skagit county	5,000 00	4,875 05	124 95
State Road No. 12—Okanogan county	53 19	.....	53 19
State Road No. 12—Okanogan county	29,518 00	29,187 68	330 32
State Road No. 18—Lewis county	20,000 00	19,684 77	315 23
State Road No. 23—Spokane to Newport....	104,016 00	104,016 00	.....
Maintenance—West side	99,760 00	96,829 18	3,430 87
Maintenance—East side	45,597 00	45,407 47	189 53
Maintenance	50,000 00	36,590 21	13,409 79
Totals.....	\$2,335,166 34	\$1,982,250 79	\$402,915 55

* \$4,634.59 and \$241.50 transferred from National Park Highway, Mineral to Morton, to Mashel Bridge and Mayfield Bridge, respectively.

Section Two

FEDERAL AID ROAD ACT

“An act to provide that the United States shall aid the states in the construction of rural post roads and for other purposes,” was passed by the Sixty-fourth Congress and approved by President Wilson on July 11th, 1916.

In a general way the act provides \$85,000,000 for co-operative highway construction of two classes during the next five years. Of this total, \$10,000,000 is to be expended for the survey, construction and maintenance of roads and trails within or partly within the national forests. This portion of the appropriation is available only upon condition that a co-operative agreement is made between the state, territory or county and the secretary of agriculture. It is also provided that the aggregate expenditures in any state, territory or county shall not exceed 10 per cent of the value, as determined by the secretary of agriculture, of the timber and forage resources which are or will be available for income upon the national forest lands within the respective county or counties wherein the roads or trails will be constructed.

Of the \$75,000,000 available for construction or improvement of roads that are now covered by rural mail, the sum of \$5,000,000 will be available for the fiscal year ending June 30, 1917; \$10,000,000 for 1918; \$15,000,000 for 1919, \$20,000,000 for 1920; and \$25,000,000 for 1921. Of these sums, 3 per cent is to be held for Federal administrative expenses.

The allotments to the states made by the secretary of agriculture are based upon the following factors: (1) The ratio of the area of each state to the total area of all states; (2) the ratio of population of each state to the population of all states; (3) the ratio of the mileage of rural delivery routes and star routes of each state to total mileage of rural delivery routes and star routes in all the states at the close of the next preceding fiscal year.

In order to obtain Federal aid under the provisions of this act, it is required that a statement of the proposed road con-

struction in which national assistance is desired be submitted to the secretary of agriculture for his approval. Upon approval of the project the surveys, plans, specifications and estimates are then submitted. After they are approved the state officials are at liberty to go ahead with the proposed work. The national treasury will pay the federal share of the cost of the work, not to exceed \$10,000 per mile, after the same has been inspected and approved by the secretary of agriculture. This portion must not exceed one-half the cost of the project. The construction work is to be done in accordance with the laws of the state, and under the direct supervision of the Highway Department, subject, however, to the inspection and approval of the secretary of agriculture.

Under the provisions of this act, none of the money appropriated for the construction or improvement of rural mail or star route postal service roads can be used, except the state contributes at least an equal amount for the road upon which the money is to be applied. It also requires that the states or their civil subdivisions maintain the roads constructed under this act. The subsequent co-operation on the part of the Federal government in the construction of roads under this act is conditioned upon the proper maintenance and preservation of any roads constructed under the act.

The apportionment to the State of Washington for the fiscal year 1917 under the provisions of this act are as follows:

For the construction of roads along the routes covered by postal service, the sum of \$71,884.28.

For the surveys, construction and maintenance of roads and trails in or partly within national forests the sum of \$91,739.00.

Any project initiated by a civil subdivision of the state must be approved by the Highway Department and transmitted through this office to the Federal department.

The rules and regulations issued by the United States Department of Agriculture under date of Sept. 1, 1916, to be applied in the expenditure of federal aid money and governing surveys, plans, specifications, estimates, contract, construction work and payments are so comprehensive that the United States

Office of Public Roads and Rural Engineering will practically have control of all work for which application for Federal aid is made. They provide that applications for Federal aid in the construction of roads within or partly within the national forests, for the first fiscal year ending June 30, 1917, shall be filed on or before October 1, 1916, and for each succeeding fiscal year on or before the 1st day of January next preceding such fiscal year. It is, therefore, required that applications for the second fiscal year, July 1, 1917, to June 30, 1918, shall be filed on or before January 1, 1917. Considering that the rules and regulations were only issued on September 1, the practical effect is that the program for the first two fiscal years, covering the apportionment of about \$183,478.00 to this state, must be worked out between now and next January.

As a tentative program for the first two fiscal years, the following was submitted to the district forester and secretary of agriculture for their consideration. In all cases the amounts stated are suggested for government co-operation, at least an equal amount to be contributed toward the proposed project by state or county provisions:

(1) Olympic Highway—Two miles in the Olympic National Forest west of Lake Quinault.....	\$15,000
(2) State Road No. 7, or Blewett Pass Highway—To complete said road through the Wenatchee National Forest	37,500
(3) State Road No. 8, or Columbia River Highway—To complete said road between Collins and Cooks, through the Columbia National Forest.....	25,000
(4) McClellan Pass Highway—Co-operation in a progressive program which will complete said highway through the Rainier National Forest within the next four years	60,000
(5) State Road No. 4—Construction across the summit section of the Colville National Forest between Wauconda and Republic.....	15,000
(6) State Road No. 12—Improvement and extension of the highway up the Methow Valley in the Chelan National Forest	7,500
(7) Inland Empire Highway—Improvement and extension of the highway along Kettle River to Laurier.....	15,000
Total.....	\$175,000

If a co-operative program along somewhat the above lines is agreed upon by the district forester and secretary of agriculture, this Department recommends the program to the legislature for action thereon. With this program in mind, this Department has asked the secretary of agriculture to give priority to those co-operative applications for national forest roads as presented by the state, or by any of the counties which are a part of the designated system of state highways. While many of the county proposals of unquestionable merit have been presented for lateral routes, offering excellent opportunities for forest resource development, it is the opinion of this Department that only such as have given proof of exceptional and urgent necessity should be given precedence over the state highway program.

In some cases the counties affected will co-operate in such highway construction, and this Department has recommended that priority be given to all such county applications. To date applications from the following counties have been referred to the district forester and secretary of agriculture, with the recommendations of this Department: Whatcom, Okanogan, Skamania, Lewis, Jefferson, Kittitas, Chelan, Grays Harbor.

For highway construction during the first fiscal year, under the provisions of section 8 of the Federal aid road act, formal application was made on September 19, 1916, for Federal co-operation for the survey, construction and maintenance of a portion of the Olympic highway lying within the Olympic national forest, for which section, approximately two miles in length, the full cost (not exceeding \$20,000) was applied for. In the way of co-operation in this construction, it is recommended that the section from the end of the present constructed road near the southeast corner of Lake Quinault to the forest reserve boundary, approximately 3½ miles in length, be constructed out of the appropriation now in hand and that available after the appropriations are made by the 1917 legislature.

While pledging co-operative construction of the 3½-mile section between the forest section and the existing constructed highway, the state in no way limits itself from additional co-operative construction extending northwesterly from the forest section towards the Queets river.

Section Three
PERMANENT HIGHWAYS

ADAMS COUNTY.
CONTRACTS COMPLETED.

TYPE PAVEMENT	Length Miles	COST				
		Total	Grading	Bridges	Surface	Per Sq. Yd. of Surface
Asphalt macadam.....	6.75	\$57,547 00	\$17,523 00	\$3,233 00	\$36,786 00	\$0.53
Gravel and crushed rock	16.74	77,219 00	24,356 00	.....	52,863 00	0.289
Totals.....	23.49	\$134,766 00	\$41,884 00	\$3,233 00	\$89,649 00	.....

The gravel and crushed rock roads shown in the table were initiated by petition of the abutting property owners and 15 per cent of the cost of the improvements was assessed to the abutting property, as provided by law.

Permanent Highway No. 2-A, an extension of Permanent Highway No. 2 from Lind to Ralston, is now under construction. The improvement, 12.5 miles in length, was initiated by petition of the abutting property owners, who will pay 15 per cent of the cost. The specifications provide for a crushed gravel surface 16 feet in width. The contract price, \$52,473.20, includes the construction of seven reinforced concrete arch bridges of Luten design and of the following dimensions: One 45-foot arch 78° skew; one 45-foot arch; two continuous 38-foot arches 30° skew; one 38-foot arch 25° skew; one 22-foot arch 70° skew; one 30-foot arch 60° skew, and one 22-foot arch 60° skew.

ASOTIN COUNTY.

The contract for the construction of Permanent Highway No. 1, 1.0 mile of asphalt macadam extending from Asotin northerly on the Clarkston road, was awarded in May, 1914, for \$23,590.00, of which \$4,590.00 was to be paid from county

funds. The improvement has been completed, but the final estimate has not been paid. This is the only permanent highway in Asotin county which has been completed to date.

The preliminary resolution providing for the construction of the Clarkston-Silcott cutoff has been approved.

BENTON COUNTY.

CONTRACTS COMPLETED.

TYPE PAVEMENT	Length Miles	COST				
		Total	Grading	Bridges	Surface	Per Sq. Yd. of Surface
Waterbound macadam*	2.67	\$7,489 00	.....	.....	.....	.....
Gravel and crushed rock	26.09	70,851 00	\$12,812 00	.....	\$57,539 00	\$0.310
Totals.....	28.76	\$77,790 00	.....	.....	.....	.....

*Cost of grading and surfacing not available.

Sixteen and 84-100 miles of the roads shown in the table are along the route of the Inland Empire Highway.

Plans have been approved for grading and surfacing with gravel 6.3 miles of road extending from Hanford southerly at an estimated cost of \$19,486.00.

CHELAN COUNTY.

CONTRACTS COMPLETED.

TYPE PAVEMENT	Length Miles	COST				
		Total	Grading	Bridges	Surface	Per Sq. Yd. of Surface
Gravel and crushed rock	12.81	\$92,983 00	\$48,061 00	\$26,040 00	\$23,812 00	\$0.192

Of the roads shown in the table, one mile is on State Road No. 7 and 4.0 miles are on the Sunset Highway. A reinforced concrete arch bridge having two 80-foot and two 90-foot spans of Luten design was constructed across the Wenatchee river near Leavenworth on Permanent Highway No. 5, at an expense of \$20,694.00.

Permanent Highway No. 8, 1.02 miles of gravel road, extending from Wenatchee northerly, is now under construction at a contract price of \$26,466.00. The contract includes a steel bridge having two 80-foot through plate girders and two 168-foot 9-inch deck truss spans which span the Wenatchee river and the Great Northern railway. The construction of this bridge will eliminate a dangerous grade crossing of the Great Northern railway.

CLALLAM COUNTY.

CONTRACTS COMPLETED.

TYPE PAVEMENT	Length Miles	COST				
		Total	Grading	Bridges	Surface	Per Sq. Yd. of Surface
Gravel and crushed rock	12.56	\$51,708 00	\$31,238 00	\$7,277 00	\$13,193 00	\$0.128

Two and one-tenth miles of the roads shown in the table are on the route of the Olympic Highway.

Plans have been approved for the construction of 8.35 miles of gravel roads at an estimated cost of \$22,191.00.

CLARKE COUNTY.

CONTRACTS COMPLETED.

TYPE PAVEMENT	Length Miles	COST				
		Total	Grading	Bridges	Surface	Per Sq. Yd. of Surface
Concrete	2.86	\$34,306 00	\$3,105 00	.....	\$31,261 00	\$1.164
Warrenite	1.80	25,755 00	1,602 00	.....	24,153 00	1.427
Waterbound macadam..	5.00	30,489 00	19,008 00	.....	20,481 00	0.685
Gravel and crushed rock*	2.30	12,354 00	.....	.....	.....	.....
Totals.....	11.96	\$111,964 00	.....	.....	.....	.....

* Cost of grading and surfacing not available.

Of the roads shown in the table, 2.86 miles of concrete, 1.8 miles of Warrenite and 1.0 mile of waterbound macadam are on the Pacific Highway and 1.1 miles of waterbound macadam

are on State Road No. 8. Two and 36-100 miles of the concrete roads listed above were paid for on the assessment plan, the adjoining property paying 15 per cent of the cost.

Permanent Highway No. 3-A, a continuation of Permanent Highway No. 3, westerly from Camas on State Road No. 8, is now under contract for \$7,896.50. The proposed improvement, 1.23 miles in length, is to be surfaced with waterbound macadam.

Permanent Highway No. 6, extending westerly from the Pacific Highway about one mile north of Salmon creek, is now under contract for \$7,998.20. The proposed improvement, 1.64 miles in length, is to be surfaced with waterbound macadam.

COLUMBIA COUNTY.

CONTRACTS COMPLETED.

TYPE PAVEMENT	Length Miles	COST				
		Total	Grading	Bridges	Surface	Per Sq. Yd. of Surface
Waterbound macadam..	8.70	\$37,445 00	\$10,832 00	.....	\$26,613 00	\$0.436
Waterbound macadam*.	2.00	4,250 00	4,250 00	.....	.....	.....
Totals.....	10.70	\$41,695 00	\$15,082 00	.....	\$26,613 00	.....

*Only grading contract completed.

Of the roads shown in the table 4.7 miles are on the Inland Empire Highway and 6.0 miles are on the eastern route of the Inland Empire Highway.

Permanent Highway No. 1-A, 1.3 miles on the eastern route of the Inland Empire Highway between Dayton and Marengo, is now under contract to be surfaced with crushed rock at a contract price of \$5,567.00.

Permanent Highway No. 2-A, 5.23 miles on the Inland Empire Highway between Dayton and the west county line, is now under contract to be surfaced with gravel at a contract price of \$16,875.00.

COWLITZ COUNTY.

CONTRACTS COMPLETED.

TYPE PAVEMENT	Length Miles	COST				
		Total	Grading	Bridges	Surface	Per Sq. Yd. of Surface
Concrete	1.30	\$10,440 00	\$1,061 00	.....	\$9,379 00	\$1.025
Asphalt macadam.....	2.50	89,676 00	25,705 00	.....	18,971 00	0.802
Crushed rock.....	1.00	11,628 00	8,198 00	.....	3,430 00	0.485
Totals.....	4.80	\$11,744 00	\$34,964 00	.....	\$26,780 00	.....

Of the roads shown in the table, 1.0 mile of crushed rock and 2.5 miles of asphalt macadam are on the Pacific Highway and 1.3 miles of concrete are on State Road No. 15. The 1.3 miles of concrete road was paid for under the assessment plan whereby the adjoining property paid 15 per cent of the cost.

The preliminary resolution of the board of county commissioners to improve a section of the Pacific Highway north and south of Castle Rock has been approved; right of way difficulties, however, have prevented the county officers from getting the improvement under way.

DOUGLAS COUNTY.

CONTRACTS COMPLETED.

TYPE PAVEMENT	Length Miles	COST				
		Total	Grading	Bridges	Surface	Per Sq. Yd. of Surface
Waterbound macadam..	3.66	\$30,000 00	\$18,068 00	.....	\$11,937 00	\$0.848
Gravel and crushed rock	4.25	23,167 00	16,366 00	.....	6,801 00	0.196
Totals.....	7.91	\$53,167 00	\$34,429 00	.....	\$18,738 00	.....

Of the roads shown in the table, 3.66 miles of waterbound macadam and 2.75 miles of gravel and crushed rock are on the Sunset Highway.

Permanent Highway No. 4, extending from Mansfield easterly, is now under contract for \$19,879.58. The proposed im-

provement is 3.95 miles in length and is to be surfaced with gravel or crushed rock.

FERRY COUNTY.

CONTRACTS COMPLETED.

TYPE PAVEMENT	Length Miles	COST				
		Total	Grading	Bridges	Surface	Per Sq. Yd. of Surface
Gravel and shell rock....	2.84	\$18,000 00	\$8,050 00	.....	\$4,950 00	\$0.189

The roads shown in the table extend from Republic northeasterly and are on State Road No. 4.

Permanent Highway No. 1-B, a one-mile extension of the Republic northeasterly road, is now under contract to be surfaced with gravel or shell rock for the sum of \$8,000.00.

FRANKLIN COUNTY.

CONTRACTS COMPLETED.

TYPE PAVEMENT	Length Miles	COST				
		Total	Grading	Bridges	Surface	Per Sq. Yd. of Surface
Concrete dolarway.....	3.00	\$21,904 00	\$8,925 00	.....	\$17,979 00	\$1.425
Asphaltic macadam.....	2.00	25,895 00	9,226 00	.....	16,669 00	1.580
Totals.....	5.00	\$47,799 00	\$18,151 00	.....	\$34,648 00	.....

The following roads are now under contract:

Permanent Highway No. 3, four miles of gravel road extending northeast from Eltopia, at a contract price of \$10,700.00.

Permanent Highway No. 4, three miles of gravel road extending from Kahlotus northeast, at a contract price of \$17,000.00.

Permanent Highway No. 5, 2.56 miles of gravel road extending from Kahlotus southwest at a contract price of \$15,686.00.

All of the roads shown in the table, and Permanent Highway No. 3 now under contract, were initiated by petition whereby 15 per cent of the cost is assessed to the adjoining property.

GARFIELD COUNTY.

CONTRACTS COMPLETED.

TYPE PAVEMENT	Length Miles	COST				
		Total	Grading	Bridges	Surface	Per Sq. Yd. of Surface
Waterbound macadam..	1.00	\$12,128 00	\$5,879 00	.....	\$6,749 00	\$0.666
Crushed rock.....	3.00	9,250 00	3,190 00	.....	6,060 00	0.287
Totals.....	4.00	\$21,378 00	\$8,569 00	.....	\$12,809 00	.....

The roads shown in the table are on the eastern route of the Inland Empire Highway.

Plans have been approved for the construction of 1.5 miles of road extending westerly from Pomeroy at an estimated cost of \$6,018.32. The specifications call for a crushed rock surface.

GRANT COUNTY.

CONTRACTS COMPLETED.

TYPE PAVEMENT	Length Miles	COST				
		Total	Grading	Bridges	Surface	Per Sq. Yd. of Surface
Gravel	28.08	\$93,837 00	\$35,303 00	\$2,881 00	\$55,653 00	\$0.303

Of the roads shown in the table 11.09 miles are on the Sunset Highway and 11.21 miles are on the North Central Highway.

Permanent Highway No. 6-A, 6.54 miles of gravel road extending from Quincy to Winchester, is now under contract for \$11,975.00.

Permanent Highway No. 8, 3.12 miles of gravel road extending west from Warden, is now under contract for \$6,-

408.50. The specifications call for a gravel surface 12 feet wide to be placed on a road previously graded by the county.

GRAYS HARBOR COUNTY.

CONTRACTS COMPLETED.

TYPE PAVEMENT	Length Miles	COST				
		Total	Grading	Bridges	Surface	Per Sq. Yd. of Surface
Concrete	5.40	\$34,298 00	\$4,434 00	.....	\$29,864 00	\$1.00
Sheet asphalt.....	1.36	14,500 00	344 00	.....	14,156 00	1.068
Gravel	25.96	82,671 00	21,069 00	.....	62,632 00	0.347
Gravel*	6.10	23,191 00	.....	.....	.....	.....
Totals.....	38.82	\$155,660 00	.....	.....	.....	.....

*Cost of grading and surfacing not available.

Of the roads shown in the table, 1.36 miles of asphalt, 5.4 miles of concrete and 24.46 miles of gravel are on the Olympic Highway.

Permanent Highway No. 12, 4.22 miles of gravel on the East Hoquiam road, is now under contract for \$24,331.39. Permanent Highway No. 13, one mile of sheet asphalt on the Olympic Highway at McCleary, is now under contract for \$15,490.90.

ISLAND COUNTY.

CONTRACTS COMPLETED.

TYPE PAVEMENT	Length Miles	COST				
		Total	Grading	Bridges	Surface	Per Sq. Yd. of Surface
Gravel	4.00	\$10,587 00	\$6,886 00	.....	\$3,701 00	\$0.128

Permanent Highway No. 2-A, 3.0 miles of gravel road on the Coupeville-Langley road extending from Lin's Corner to Bay View, is now under contract for \$4,965.00.

JEFFERSON COUNTY.
CONTRACTS COMPLETED.

TYPE PAVEMENT	Length Miles	COST				
		Total	Grading	Bridges	Surface	Per Sq. Yd. of Surface
Gravel	1.50	\$11,880 00	\$10,062 00	.....	\$1,818 00	\$0.117
Gravel*	5.00	27,480 00	.....	.....	.....	.....
Totals.....	6.50	\$38,860 00	.....	.....	.....	.....

*Cost of grading and surfacing not available.

Three and one-half miles of the roads shown in the table are on the Olympic Highway south of Quilcene.

Permanent Highway No. 3, 2.58 miles of gravel road on the Olympic Highway north of Leland, is now under contract for \$12,986.00.

KING COUNTY.
CONTRACTS COMPLETED.

TYPE PAVEMENT	Length Miles	COST				
		Total	Grading	Bridges	Surface	Per Sq. Yd. of Surface
Concrete	8.50	\$44,148 00	\$18,907 00	.....	\$30,236 00	\$0.906
Brick	20.71	556,890 00	66,184 00	.....	490,256 00	2.209
Warrenite	2.50	48,800 00	11,277 00	\$1,100 00	31,483 00	1.506
Asphaltic macadam	1.70	82,719 00	1,558 00	.....	31,161 00	1.838
Asphaltic macadam*.....	6.02	90,841 00	.....	.....	.....	.....
Gravel and crushed rock.	40.80	298,968 00	196,255 00	5,887 00	92,321 00	0.257
Gravel and crushed rock*	3.25	22,508 00	.....	.....	.....	.....
Totals.....	77.98	\$1,084,514 00	.....	.....	.....	.....

*Cost of grading and surfacing not available.

Of the roads shown in the table, 7.9 miles of gravel are on the Sunset Highway and 3.5 miles of brick, 3.25 miles of gravel and 2.5 miles of Warrenite are on the Pacific Highway.

The following improvements are now under contract:

Permanent Highway No. 2-C, 3.63 miles of brick road from Bothell to Hollywood and 1.29 miles of concrete road from

Bothell north to the county line on the Pacific Highway, at a contract price of \$84,400.00.

Permanent Highway No. 2-D, an extension of Permanent Highway No. 2-C from Woodinville to Derby. The improvement is to be paved with brick at a contract price of \$21,169.00.

Permanent Highway No. 6-A, extending from the east end of Permanent Highway No. 6 to Kent, a distance of 1.35 miles. The easterly end, 0.23 mile in length, is to be paved with concrete and the remainder is to be surfaced with gravel. The contract price, \$29,495.00, includes the cost of a reinforced concrete bridge of two 75-foot spans across the White river.

Permanent Highway No. 11, a concrete road extending from Enumclaw toward Buckley, 3.25 miles, at a contract price of \$52,755.00.

Permanent Highway No. 11-A, a concrete road extending westerly from Enumclaw 2.54 miles on the McClellan Pass Highway, at a contract price of \$41,351.00.

Permanent Highway No. 12-A, a gravel road extending northerly from Renton 3.84 miles, at a contract price of \$44,965.00.

Permanent Highway No. 13, a gravel road extending from Enumclaw easterly 1.62 miles on the McClellan Pass Highway, at a contract price of \$16,093.00.

Permanent Highway No. 14, a road extending southerly from Seattle over Bond roads Nos. 12 and 13 to the Des Moines dock, a distance of 9.63 miles, to be paved with monolithic brick, for \$222,691.22.

Plans have been approved for the construction of Permanent Highway No. 2-E, at an estimated cost of \$21,225.69. The proposed improvement extends from Bothell to Kirkland.

KITSAP COUNTY.

CONTRACTS COMPLETED.

TYPE PAVEMENT	Length Miles	COST				
		Total	Grading	Bridges	Surface	Per Sq. Yd. of Surface
Gravel	4.18	\$36,613 00	\$32,726 00	.....	\$3,887 00	\$0.128

Permanent Highway No. 1-B, an extension of Permanent Highway No. 1 southwesterly through Port Orchard, is now under contract. The contract price for grading the portions that lie outside of the city limits, and for surfacing the entire improvement with crushed rock is \$4,794.90.

Permanent Highway No. 4, 1.27 miles of graveled road on Bainbridge Island, is now under contract for \$4,649.00.

KITKITAS COUNTY.

CONTRACTS COMPLETED.

TYPE PAVEMENT	Length Miles	COST				
		Total	Grading	Bridges	Surface	Per Sq. Yd. of Surface
Concrete dolarway.....	1.70	\$18,835 00	.....	.....	\$18,835 00	\$1.128
Brick	1.20	24,539 00	\$942 00	.....	23,597 00	2.124
Gravel	23.80	64,314 00	16,349 00	.....	47,965 00	0.298
Totals.....	26.70	\$107,688 00	\$17,291 00	.....	\$80,397 00	.....

Of the roads shown in the table, 14.05 miles of gravel are on the Sunset Highway and 2.0 miles of gravel are on the Inland Empire Highway. The Dolarway road, 1.7 miles in length, was resurfaced with sheet asphalt in 1915 at the expense of county funds.

The following permanent highways are under contract:

Permanent Highway No. 2-B, 1.0 mile of gravel road northeast of Ellensburg, at a contract price of \$4,319.64. Perma-

nent Highway No. 3-A, 2.83 miles of gravel road on the Sunset Highway between the Teanaway river and Swauk creek, at a contract price of \$11,850.00.

Permanent Highway No. 4-B, 1.0 mile of gravel road south of Kittitas, at a contract price of \$4,722.00.

Permanent Highway No. 5-A, 1.46 miles of gravel road on the Inland Empire Highway south of Ellensburg, at a contract price of \$5,000.00.

Permanent Highway No. 7, 3.15 miles of gravel road west of Ellensburg, at a contract price of \$12,000.00.

KLICKITAT COUNTY.
CONTRACTS COMPLETED.

TYPE PAVEMENT	Length Miles	COST				
		Total	Grading	Bridges	Surface	Per Sq. Yd. of Surface
Asphalt macadam.....	3.30	\$50,095 00	\$29,854 00	.....	\$20,241 00	\$0.816
Waterbound macadam..	2.00	21,219 00	8,246 00	.....	12,973 00	0.829
Totals.....	5.30	\$71,314 00	\$38,100 00	.....	\$33,214 00	.....

Four and 3-10 miles of the roads shown in the table are on State Road No. 8.

Permanent Highway No. 5, 1.9 miles of road on the Lyle-High Prairie-Goldendale road, is now under contract to be graded and surfaced with crushed rock for \$17,658.78.

The preliminary resolution has been approved for the construction of Permanent Highway No. 6 on the White Salmon-Snowden road. The proposed improvement was initiated by petition by the adjoining property holders, who are to pay 75 per cent of the cost.

LEWIS COUNTY.

CONTRACTS COMPLETED.

TYPE PAVEMENT	Length Miles	COST				
		Total	Grading	Bridges	Surface	Per Sq. Yd. of Surface
Concrete*	1.00	\$15,682 00	.....	.....	.....	.....
Concrete	7.89	102,548 00	\$17,108 00	.....	\$85,448 00	\$1.212
Waterbound macadam..	1.50	6,075 00	2,002 00	.....	4,078 00	0.378
Totals.....	9.89	\$124,308 00	.....	.....	.....	.....

*Cost of grading and surfacing not available.

All of the roads shown in the table are on the route of the Pacific Highway.

Permanent Highway No. 2-C, 1.0 mile of concrete road on the Pacific Highway south of Chehalis, is now under contract for \$13,995.00. Permanent Highway No. 3-A, 1.06 miles of concrete road on the Pacific Highway north of Centralia, is now under contract for \$12,400.00.

LINCOLN COUNTY.

CONTRACTS COMPLETED.

TYPE PAVEMENT	Length Miles	COST				
		Total	Grading	Bridges	Surface	Per Sq. Yd. of Surface
Concrete	0.50	\$1,500 00	.....	.....	\$1,500 00	\$0.426
Waterbound macadam..	16.80	82,080 00	\$23,053 00	\$1,950 00	57,027 00	0.496
Gravel	12.53	46,717 00	1,889 00	.....	44,828 00	0.381
Totals.....	29.83	\$130,247 00	\$24,942 00	\$1,950 00	\$108,855 00	.....

Of the roads shown in the table, 0.5 mile of concrete, 3.17 miles of waterbound macadam and 12.53 miles of gravel are on the Sunset Highway and 13.13 miles of waterbound macadam are on the North Central Highway.

Permanent Highway No. 1-B, 12.97 miles of gravel road extending westerly from Davenport on the Sunset Highway, is now under contract for \$30,200.00.

MASON COUNTY.
CONTRACTS COMPLETED.

TYPE PAVEMENT	Length Miles	COST				
		Total	Grading	Bridges	Surface	Per Sq. Yd. of Surface
Gravel	3.98	\$26,274 00	\$21,684 00	.....	\$4,590 00	\$0.123
Gravel*	1.00	7,169 00	.....	.....	.....	.....
Total.....	4.98	\$33,443 00	.....	.....	.....	.....

*Cost of grading and surfacing not available.

All of the roads shown in the table are on the Olympic Highway.

Permanent Highway No. 3, 1.11 miles of gravel road extending northeast of Shelton on the Shelton-Allyn road, is now under contract for \$5,188.00.

OKANOGAN COUNTY.
CONTRACTS COMPLETED.

TYPE PAVEMENT	Length Miles	COST				
		Total	Grading	Bridges	Surface	Per Sq. Yd. of Surface
Gravel and crushed rock	26.00	\$43,523 00	\$24,275 00	\$1,012 00	\$18,236 00	\$0.093

Of the roads shown in the table, 14.76 miles are on State Road No. 10 and 4.63 miles are on State Road No. 12.

Permanent Highway No. 6-A, 3.71 miles of gravel road on the Havillah Hill road, is now under contract for \$7,750.00. Permanent Highway No. 10, 1.7 miles of gravel road on State Road No. 10 north of Brewster, is now under contract for \$2,000.00.

PACIFIC COUNTY
CONTRACTS COMPLETED.

TYPE PAVEMENT	Length Miles	COST				
		Total	Grading	Bridges	Surface	Per Sq. Yd. of Surface
Concrete	1.16	\$13,990 00	\$563 00	\$5,452 00	\$7,975 00	\$1.10
Waterbound macadam..	11.75	65,870 00	12,527 00	3,900 00	49,543 00	0.581
Totals.....	12.91	\$79,860 00	\$13,090 00	\$9,252 00	\$57,518 00	.....

Of the roads shown in the table, 1.16 miles of concrete and 10.75 miles of waterbound macadam are on the National Park Highway.

Permanent Highway No. 3-A, 1.4 miles of waterbound macadam on the Sand Ridge road north of Ilwaco, is now under contract for \$8,166.00.

Permanent Highway No. 5-A, 1.08 miles of concrete and waterbound macadam on the National Park Highway between Raymond and South Bend, is now under contract for \$20,900.00.

PEND OREILLE COUNTY.
CONTRACTS COMPLETED.

TYPE PAVEMENT	Length Miles	COST				
		Total	Grading	Bridges	Surface	Per Sq. Yd. of Surface
Gravel or crushed rock	11.09	\$40,690 00	\$25,239 00	.....	\$15,451 00	\$0.153

Three and one-tenth miles of the roads shown in the table are on State Road No. 23.

Permanent Highway No. 2-B, 1.25 miles of gravel road south of Usk, is now under contract for \$2,470.79. Permanent Highway No. 3-A, 1.0 mile of gravel road through the town of Metaline, is now under contract for \$3,120.05.

PIERCE COUNTY.
CONTRACTS COMPLETED.

TYPE PAVEMENT	Length Miles	COST				
		Total	Grading	Bridges	Surface	Per Sq. Yd. of Surface
Concrete	23.92	\$282,882 00	\$42,351 00	.....	\$240,081 00	\$1.049
Sheet asphalt.....	3.97	60,316 00	6,302 00	.....	54,014 00	1.406
Bitulithic	6.80	101,948 00	44,860 00	.....	57,088 00	0.864
Totals.....	34.69	\$444,046 00	\$93,513 00	.....	\$351,133 00	.....

Of the roads shown in the table, 12.58 miles of concrete are on the Pacific Highway and 11.34 miles of concrete are on the National Park Highway.

Permanent Highway No. 2-B, 6.07 miles of bitucrete on a concrete base on the National Park Highway, is now under contract for \$95,970.00.

Permanent Highway No. 7, 3.7 miles of Warrenite re-topping on old waterbound macadam on the Buckley-Sumner road, is now under contract for \$37,843.00.

Permanent Highway No. 8, 2.12 miles of bitulithic on a concrete base on the Pacific Highway extending from Dupont southwest, is now under contract for \$34,696.00.

SAN JUAN COUNTY.
CONTRACTS COMPLETED.

TYPE PAVEMENT	Length Miles	COST				
		Total	Grading	Bridges	Surface	Per Sq. Yd. of Surface
Gravel	3.09	\$11,956 00	\$7,510 00	.....	\$4,446 00	\$0.165

Plans have been approved for the construction of 2.36 miles of crushed rock road from East Sound toward Orcas on Orcas Island, at an estimated cost of \$15,000.00.

San Juan county has a small assessed valuation and, therefore, a small income for permanent highway construction. The amount of tax for this purpose from the 1915 levy was \$2,411.00. Chapter 104 of the Session Laws of 1913 gives this county for permanent highway purposes all taxes levied for the

public highway fund. The county's credit from the 1915 public highway levy was \$1,607.00. No permanent highway work was undertaken by San Juan county during 1916. The funds will accumulate with interest and will be available for future construction.

SKAGIT COUNTY.

CONTRACTS COMPLETED.

TYPE PAVEMENT	Length Miles	COST				Per Sq. Yd. of Surface
		Total	Grading	Bridges	Surface	
Concrete	7.73	\$91,062 00	\$7,610 00	\$2,695 00	\$80,747 00	\$1.132
Waterbound macadam..	4.00	26,069 00	2,855 00	.....	23,704 00	0.863
Totals.....	11.73	\$117,111 00	\$9,965 00	\$2,695 00	\$104,451 00	.....

A reinforced concrete cantilever girder bridge 78 feet in length was constructed across Hanson creek on Permanent Highway No. 2-A east of Sedro Woolley, for \$2,695.00. The structure is of interest because of the cantilever design.

Permanent Highway No. 4, 1.25 miles of concrete pavement on the Pacific Highway north of Mount Vernon, is now under construction for \$12,556.55.

SKAMANIA COUNTY.

CONTRACTS COMPLETED.

TYPE PAVEMENT	Length Miles	COST				Per Sq. Yd. of Surface
		Total	Grading	Bridges	Surface	
Gravel or crushed rock.	2.10	\$11,310 00	\$7,808 00	.....	\$3,507 00	\$0.235
Gravel or crushed rock*	2.64	12,458 00	.....	.....	.....	.....
Totals.....	4.74	\$23,768 00	.....	.....	.....	.....

* Cost of grading and surfacing not available.

The roads shown in the table are on State Road No. 8.

Permanent Highway No. 1-B, an extension of Permanent Highway No. 1 and No. 1-A, up the Little White Salmon river 1.9 miles, is now under contract to be surfaced with crushed rock for \$6,552.51.

SNOHOMISH COUNTY.

CONTRACTS COMPLETED.

TYPE PAVEMENT	Length Miles	COST				
		Total	Grading	Bridges	Surface	Per Sq. Yd. of Surface
Concrete	5.89	\$54,985 00	\$7,980 00	.....	\$46,985 00	\$1.043
Brick	1.02	25,467 00	8,970 00	.....	21,497 00	1.996
Gravel	38.40	168,188 00	108,028 00	\$8,506 00	56,629 00	0.169
Totals.....	45.31	\$248,590 00	\$114,978 00	\$8,506 00	\$125,111 00	.....

Twelve and 8-10 miles of the gravel roads shown in the table are on the Pacific Highway.

The following permanent highways are now under contract:

Permanent Highway No. 21, 1.8 miles of gravel south of Index, for \$14,326.00.

Permanent Highway No. 22, 2.2 miles of gravel east of Marysville, for \$9,691.76.

Permanent Highway No. 24, 1.34 miles of gravel west of Hartford, for \$9,459.20.

Permanent Highway No. 25, 1.0 mile of concrete north of Marysville on the Pacific Highway for \$12,895.00.

Permanent Highway No. 26, 1.38 miles of gravel southeast of Index, for \$9,464.00.

SPOKANE COUNTY.

CONTRACTS COMPLETED.

TYPE PAVEMENT	Length Miles	COST				
		Total	Grading	Bridges	Surface	Per Sq. Yd. of Surface
Asphalt macadam*.....	1.50	\$18,430 00	.....	.....	.....	.....
Asphalt macadam.....	33.55	333,097 00	\$135,138 00	\$4,516 00	\$193,443 00	\$0.612
Warrenite	1.87	19,590 00	2,449 00	.....	17,141 00	1.319
Waterbound macadam..	22.66	119,956 00	30,508 00	.....	89,448 00	0.434
Gravel *.....	14.00	43,466 00	.....	.....	.....	.....
Gravel	7.35	70,925 00	46,489 00	.....	24,436 00	0.354
Totals.....	80.43	\$505,464 00	\$214,584 00	\$4,516 00	\$324,468 00	.....

*Cost of grading and surfacing not available.

Of the roads shown in the table, 8.31 miles of waterbound macadam, 4.1 miles of asphalt macadam and 7.35 miles of graveled roads, are on the Inland Empire Highway, 1.37 miles

of Warrenite and 2.28 miles of asphalt macadam are on State Road No. 23, and 7.07 miles of asphalt macadam, 3.0 miles of waterbound macadam and 14 miles of graveled roads are on the Sunset Highway.

Of the roads shown in the table, the following were initiated by petition of the adjoining property holders: Five and 57-100 miles of asphaltic macadam, 52.77 per cent of the cost assessed to adjoining property; 25.7 miles of asphaltic macadam, 15 per cent of cost assessed; 17.2 miles of waterbound macadam, 15 per cent of cost assessed; 21.35 miles of graveled roads, 15 per cent of cost assessed.

An 80-foot reinforced concrete arch bridge was constructed across Rock creek on Palouse Permanent Highway No. 12 near Rockford at a cost of \$4,516.00.

The following permanent highways are now under contract:

Permanent Highway No. 4-A, re-topping 2.49 miles of the Appleway, or Sunset Highway east of Spokane, with asphaltic concrete, for \$26,151.00.

Permanent Highway No. 9-A, 4.0 miles of asphaltic macadam between Spring Valley and North Pine for \$39,750.00.

Permanent Highway No. 11-A, 5.58 miles of asphaltic concrete on waterbound macadam base north of Cheney for \$55,357.00, 15 per cent of cost assessed to adjoining property.

Permanent Highway No. 12-A, 11.45 miles of Warrenite with asphaltic macadam shoulders between Rockford and Waverly for \$165,500.00, 15 per cent of cost assessed.

Permanent Highway No. 13-B, 3.88 miles of asphaltic macadam on the Inland Empire Highway northwest of Deer Park for \$34,637.00; 15 per cent of cost assessed.

Permanent Highway No. 15, 1.51 miles of graveled road south of Moran for \$12,760.00, 15 per cent of cost assessed.

Permanent Highway No. 16, 1.1 miles of gravel road west of Moran for \$4,800.00, 15 per cent of cost assessed.

Permanent Highway No. 17, 1.1 miles of gravel road extending southeasterly from Seventeenth avenue on the east city limits of Spokane for \$3,197.00, 15 per cent of cost assessed.

Permanent Highway No. 18, 2.0 miles of asphaltic macadam northeast of Mead for \$8,600.00.

Plans have been approved for the construction of 1.0 mile of asphaltic macadam south of Valley Ford at an estimated cost of \$8,129.40, 15 per cent of which is to be assessed to the adjoining property.

STEVENS COUNTY.

CONTRACTS COMPLETED.

TYPE PAVEMENT	Length Miles	COST				
		Total	Grading	Bridges	Surface	Per Sq. Yd. of Surface
Gravel	18.93	\$48,089 00	\$30,500 00	.....	\$17,449 00	\$0.174

Two and one-half miles of the graveled roads shown in the table are on the route of the Inland Empire Highway.

Permanent Highway No. 1-C, an extension of Permanent Highway No. 1 from Addy toward Gifford, 3.4 miles in length, is now under contract to be surfaced with gravel for \$8,468.00.

Permanent Highway No. 2-A, an extension of the Springdale-Hunters Highway, 5.48 miles in length, is now under contract to be surfaced with crushed rock for \$6,000.00. The grading of this improvement has been completed at a cost of \$14,162.47.

THURSTON COUNTY.

CONTRACTS COMPLETED.

TYPE PAVEMENT	Length Miles	COST				
		Total	Grading	Bridges	Surface	Per Sq. Yd. of Surface
Gravel *	4.50	\$10,549 00	.....	.....	.....	.....
Gravel	10.12	50,864 00	\$19,650 00	\$2,000 00	\$28,614 00	\$0.239
Totals	14.62	\$61,413 00	.....	.....	.....	.....

*Cost of grading and surfacing not available.

Four miles of the roads shown in the table are on the Olympic Highway and 8.62 miles are on the Pacific Highway.

Permanent Highway No. 2-B, 1.0 mile of concrete pavement east of Olympia on the Pacific Highway, is now under contract for \$14,500.00.

Permanent Highway No. 3-A, 2.49 miles of gravel road northeast of Little Rock on the Olympia-Little Rock road, is now under contract for \$7,661.00.

WAHKIAKUM COUNTY.

Wahkiakum county has a small assessed valuation and, therefore, a small income for the permanent highway fund. The 1915 levy for this fund was \$3,077.00. The first improvement under the permanent highway laws was undertaken by this county in June, 1916. The contract provides for the surfacing of 5.28 miles of road with crushed rock for \$15,700.00. Work on the improvement has been suspended for the winter because of the heavy rains which make highway construction practically impossible.

WALLA WALLA COUNTY.

CONTRACTS COMPLETED.

TYPE PAVEMENT	Length Miles	COST				
		Total	Grading	Bridges	Surface	Per Sq. Yd. of Surface
Asphaltic macadam	3.00	\$19,197 00	\$1,021 00	.....	\$18,176 00	\$2.49
Waterbound macadam..	22.78	116,203 00	14,295 00	.....	101,908 00	0.484
Gravel and crushed rock	5.92	29,213 00	6,588 00	.....	22,375 00	0.409
Totals.....	31.70	\$164,613 00	\$22,154 00	.....	\$142,459 00	.....

Of the roads shown in the table, 3.0 miles of asphaltic macadam, 18.16 miles of waterbound macadam and 3.5 miles of graveled roads are on the Inland Empire Highway.

Permanent Highway No. 11, 5.25 miles of gravel road on the Inland Empire Highway between Wallula and Touchet, is now under contract for \$17,000.00.

Plans have been approved for the construction of the following roads:

Permanent Highway No. 13, 2.46 miles of graveled road north of Walla Walla, at an estimated cost of \$7,329.00.

Permanent Highway No. 14, 1.25 miles of graveled road on the Inland Empire Highway between Touchet and Wallula, at an estimated cost of \$4,125.00.

WHATCOM COUNTY.

CONTRACTS COMPLETED.

TYPE PAVEMENT	Length Miles	COST				
		Total	Grading	Bridges	Surface	Per Sq. Yd. of Surface
Concrete	9.30	\$127,798 00	\$18,335 00	.....	\$109,463 00	\$1.232
Gravel	10.66	66,701 00	23,722 00	\$4,810 00	38,169 00	0.381
Totals.....	19.96	\$194,499 00	\$42,057 00	\$4,810 00	\$147,632 00	.....

Two and 7-10 miles of the concrete roads shown in the table are on the route of the Pacific Highway.

Five miles of the concrete roads shown in the table were initiated by petition of the property owners and 50 per cent of the cost was assessed to the adjoining property.

Permanent Highway No. 2-B, 5.0 miles of concrete pavement on the Pacific Highway northwest of Bellingham, is now under contract for \$66,990.00. The improvement was initiated by petition of the adjoining property owners and 50 per cent of the cost is to be assessed to the adjoining property.

WHITMAN COUNTY.

CONTRACTS COMPLETED.

TYPE PAVEMENT	Length Miles	COST				
		Total	Grading	Bridges	Surface	Per Sq. Yd. of Surface
Asphaltic macadam.....	18.11	\$173,573 00	\$55,035 00	.....	\$118,543 00	\$0.782
Waterbound macadam..	2.44	17,961 00	4,187 00	.....	13,774 00	0.616
Totals.....	20.55	\$191,534 00	\$59,222 00	.....	\$132,317 00	.....

Of the roads shown in the table, 4.81 miles are on the Inland Empire Highway and 5.82 miles are on the second division of

the eastern route of the Inland Empire Highway. All of the improvements were initiated by petition by the adjoining property holders and 15 per cent of the cost was assessed to the adjoining property with the exception of Permanent Highway No. 5, 2.8 miles of asphaltic macadam, 16 per cent of the cost of which was assessed.

Permanent Highways Nos. 9-A and 9-B, highways having a total length of 11.32 miles and lying between Colfax and Pullman, have been graded at an expense of \$20,905.52, and now are under contract to be surfaced with crushed rock for \$46,633.00. Fifteen per cent of the cost of the grading and surfacing is assessed to the adjoining property.

Permanent Highway No. 10, 4.72 miles on the Donahue road north of Thornton, is now under contract to be surfaced with waterbound macadam for \$41,547.00, 15 per cent of which is to be assessed to the adjoining property.

Plans have been approved for the construction of the following roads:

Permanent Highway No. 11, 3.28 miles of road east of Thornton to be surfaced with gravel at an estimated cost of \$18,270.17, 15 per cent of which is to be assessed to the adjoining property.

Permanent Highway No. 12, 12.06 miles of road between La Crosse and Le Roy to be surfaced with gravel at an estimated cost of \$38,115.30, 15 per cent of which is to be assessed.

The preliminary resolution of the board of county commissioners to improve an extension of Permanent Highway No. 10 southwest of Pullman under the permanent highway laws and assessing 30 per cent of the cost to the adjoining property has been approved.

YAKIMA COUNTY.

CONTRACTS COMPLETED.

TYPE PAVEMENT	Length Miles	COST				
		Total	Grading	Bridges	Surface	Per Sq. Yd. of Surface
Asphaltic macadam*.....	5.06	\$19,749 00	.....	.....	.....	.....
Asphaltic macadam.....	1.50	9,247 00	\$2,842 00	.....	\$6,905 00	\$0.496
Waterbound macadam..	12.85	55,676 00	12,239 00	.....	43,437 00	0.415
Gravel or crushed rock.	28.82	104,738 00	21,022 00	.....	83,716 00	.351
Totals.....	47.73	\$189,410 00	.....	.....	.....	.....

*Cost of grading and surfacing not available.

Of the roads shown in the table, 3.5 miles of asphaltic macadam and 14.77 miles of graveled roads are on the Inland Empire Highway and 2.06 miles of asphaltic macadam, 2.0 miles of waterbound macadam and 4.75 miles of graveled roads are on the McClellan Pass Highway.

The following permanent highways are now under contract:

Permanent Highway No. 3-C, 1.61 miles of gravel road on the Inland Empire Highway north of North Yakima, for \$8,490.60.

Permanent Highway No. 20, 1.0 mile of gravel road west of Wapato, for \$3,180.00.

Plans have been approved for the construction of Permanent Highway No. 15-A, 1.06 miles of graveled road on the Liberty road, at an estimated cost of \$5,181.00, and for the construction of Permanent Highway No. 21, 4.0 miles of graveled road northwest of Buena at an estimated cost of \$11,947.40.

FINANCIAL STATEMENT PERMANENT HIGHWAY FUND, MAINTENANCE AND CONSTRUCTION.

MAY 1, 1915, TO SEPTEMBER 30, 1916.

COUNTIES	Amount Available May 1, 1915	Levy 1914	Levy 1915	Motor License Fund 1915-1916	Interest Credit Jan. 1, 1916	Total Available Sept. 30, 1916	Total Expended May 1, 1915, to Sept. 30, 1916*	Balance Sept. 30, 1916 †
Adams	\$14,925 21	\$31,619 00	\$34,155 00	\$7,500 90	\$351 91	\$38,512 02	\$32,712 92	\$36,000 10
Asotin	7,507 61	5,793 00	5,914 00	1,337 03	247 87	20,800 11	3,601 48	17,198 63
Benton	25,715 47	20,244 00	19,957 00	4,575 99	580 92	71,013 36	51,249 69	19,763 69
Chelan	8,685 86	27,708 00	27,718 00	6,318 99	261 32	70,702 17	54,922 97	15,779 20
Clallam	152 40	18,533 00	18,643 00	4,240 90	69 72	41,639 02	17,845 40	23,793 62
Clarke	3,953 46	28,013 00	28,078 00	6,396 20	323 40	66,764 06	45,773 66	20,990 40
Columbia	13,980 92	14,429 00	14,172 00	3,254 30	412 43	46,198 70	21,429 29	24,769 41
Cowlitz	18,515 94	20,478 00	20,188 00	4,628 98	544 16	64,355 08	38,866 87	25,488 16
Douglas	6,949 52	16,749 00	16,778 00	3,822 91	244 00	44,543 43	20,243 67	24,299 76
Ferry	650 06	4,743 00	4,704 00	1,076 03	42 61	11,215 72	1,627 20	9,588 52
Franklin	8,978 86	18,852 00	16,297 00	3,944 21	369 83	48,441 95	3,435 45	45,006 50
Garfield	10,216 96	8,156 00	8,350 00	1,886 51	333 08	28,942 57	10,629 13	18,313 44
Grant	4,597 36	24,251 00	23,995 00	5,498 91	216 89	58,534 16	32,189 49	26,364 67
Grays Harbor	38,182 13	56,361 00	54,736 00	12,625 45	943 89	162,853 47	75,932 82	86,900 65
Island †	607 08	4,493 00	4,560 00	630 24	30 99	10,311 26	4,454 90	5,856 36
Jefferson	2,782 97	10,988 00	10,897 00	2,492 71	48 42	27,159 10	14,958 19	12,200 91
King	95,811 13	367,718 00	371,157 00	84,318 99	4,943 83	923,949 05	494,805 34	429,143 71
Kitsap	4,621 75	9,666 00	9,890 00	2,234 96	114 26	26,526 97	21,552 25	4,974 72
Kittitas	2,805 76	31,818 00	31,232 00	7,173 43	234 67	73,313 91	47,216 74	26,097 17
Klickitat	9,063 51	21,796 00	20,550 00	4,796 91	233 19	56,464 61	42,000 75	14,463 86
Lewis	4,407 08	36,154 00	36,108 00	8,236 93	337 30	85,298 31	68,941 92	16,356 39
Lincoln	11,686 89	37,824 00	39,009 00	8,738 40	307 91	97,616 20	82,066 20	15,550 00
Mason	963 43	9,467 00	9,304 00	2,136 94	160 73	22,061 15	9,463 34	12,597 81
Okanogan	6,927 39	12,578 00	13,035 00	2,913 35	135 56	35,389 30	24,919 51	10,469 79
Pacific	20,491 45	23,735 00	23,199 00	5,337 43	331 14	78,094 02	50,667 17	22,426 85
Pend Oreille	2,722 23	10,046 00	9,497 00	2,214 45	83 27	24,563 00	20,003 50	4,559 50
Pierce	31,180 26	133,235 00	131,347 00	30,121 25	2,235 07	323,218 53	150,290 53	177,928 05
San Juan †	2,703 67	4,145 00	4,018 00	556 52	34 86	11,453 06	4,123 96	7,334 12
Skagit	2,542 61	33,143 00	32,694 00	7,496 06	420 22	76,299 89	59,143 96	17,155 94
Skamania	710 04	7,307 00	7,447 00	1,636 45	34 86	17,184 35	9,185 47	7,998 88
Snohomish	1,231 11	61,158 00	60,865 00	13,902 47	369 86	137,516 44	111,563 47	25,922 97
Spokane	73,989 63	187,811 00	183,107 00	42,863 24	2,620 09	500,390 96	314,796 72	185,594 24
Stevens	—7 14	17,845 00	17,910 00	4,077 51	154 92	39,980 59	22,126 31	17,854 28
Thurston	10,237 79	21,796 00	22,296 00	5,088 80	307 91	59,725 50	41,151 19	18,574 31
Wahkiakum	10,257 33	3,080 00	3,077 00	701 84	267 24	17,333 41	5,519 12	11,864 29
Walla Walla	533 04	47,011 00	47,841 00	10,333 89	340 33	106,579 76	60,864 16	45,725 60
Whatcom	36,943 51	44,708 00	44,968 00	10,229 08	301 71	137,645 30	114,720 80	22,924 50
Whitman	20,780 16	70,445 00	69,260 00	15,897 69	1,107 63	177,460 53	53,694 80	123,765 73
Yakima	25,836 07	47,553 00	48,410 00	10,961 20	430 22	133,180 49	77,343 54	55,836 95
Totals.....	\$547,810 60	\$1,551,304 00	\$1,550,347 00	\$332,791 00	\$21,313 93	\$4,023,571 52	\$2,346,043 84	\$1,677,527 68

*Amount shown as expended does not include retained percentage on contracts, nor outstanding obligations. † Includes credit from Public Highway fund. ‡ Balance available for construction and maintenance but cannot be expended until paid into fund.

FINANCIAL STATEMENT PERMANENT HIGHWAY CONSTRUCTION FUND.

COUNTIES	All Levies and Interest Credits to May 1, 1915*	Total Expended to May 1, 1915†	95% of Levies for 1914 and 1915 and In- terest Credit Jan. 1, 1916	Expended May 1, 1915, to Sept. 30, 1916‡	Total Levies and Interest Credits Sept. 30, 1916	Total Expended Sept. 30, 1916†	Balance Sept. 30, 1916 §
Adams	\$100,157 08	\$88,111 72	\$83,087 21	\$60,258 48	\$108,194 24	\$148,370 20	\$14,824 04
Asotin	19,250 49	12,332 13	11,309 52	2,520 00	30,620 01	14,832 18	15,787 83
Benton	60,281 46	36,489 29	38,711 87	48,012 13	98,908 33	79,501 42	19,491 91
Chelan	66,470 26	58,808 37	52,916 02	49,529 48	119,386 28	107,837 85	11,548 43
Clallam	39,384 60	39,490 16	35,886 92	12,863 01	74,771 52	52,343 17	22,428 35
Clarke	67,985 98	64,284 72	58,609 85	42,089 81	121,606 53	106,324 58	15,281 90
Columbia	37,163 86	24,114 94	27,583 43	20,185 84	64,747 29	44,300 78	20,446 51
Cowlitz	44,906 69	27,989 70	39,176 86	34,306 98	84,088 55	62,276 68	21,806 92
Douglas	46,751 96	40,266 58	32,094 65	18,435 00	78,846 61	58,751 58	20,095 03
Ferry	13,366 88	13,000 00	9,017 26	.....	22,888 64	13,000 00	9,888 64
Franklin	48,228 01	40,628 85	33,761 43	2,776 59	81,989 44	43,406 44	38,584 00
Garfield	22,643 89	12,716 01	16,013 78	9,249 90	38,657 67	21,965 91	16,691 76
Grant	67,287 38	63,431 63	46,050 59	30,404 79	113,337 97	98,886 42	19,501 55
Grays Harbor	142,007 42	106,911 15	106,491 04	67,746 91	248,498 46	174,658 06	73,840 40
Island †	8,626 13	8,305 45	8,631 34	4,253 85	17,257 47	12,559 30	4,698 17
Jefferson	30,150 85	27,487 28	20,839 17	11,379 81	50,990 02	38,867 09	12,122 93
King	988,682 46	894,575 31	706,875 13	423,787 60	1,695,557 59	1,318,362 91	377,194 68
Kitsap	27,057 05	23,289 80	18,692 46	17,941 18	45,749 51	41,211 08	4,538 43
Kittitas	76,478 69	76,134 63	60,182 17	38,727 63	136,600 86	114,862 26	21,738 60
Klickitat	48,973 17	41,243 84	40,466 89	33,755 29	39,440 06	74,999 13	14,440 93
Lewis	87,007 95	82,769 81	69,086 20	62,521 20	156,044 15	145,291 01	10,753 14
Lincoln	106,821 08	94,455 12	78,299 26	72,312 27	179,120 29	166,767 39	12,352 90
Mason	26,716 36	26,244 13	17,993 18	8,212 10	44,709 54	34,456 23	10,253 31
Okanogan	30,801 56	24,291 85	24,277 91	23,157 20	55,079 47	47,449 05	7,630 42
Pacific	68,949 61	43,374 99	44,918 44	44,762 72	108,867 05	88,137 71	20,729 34
Pend Oreille	27,431 31	25,354 08	18,649 12	16,961 55	46,080 43	42,305 63	3,774 80
Pierce	382,612 81	359,713 37	253,685 47	120,570 27	686,298 29	480,283 64	156,014 64
San Juan †	10,256 18	7,870 26	7,789 71	4,085 23	18,045 89	11,965 49	6,080 40
Skagit	72,413 86	71,612 79	62,970 12	56,551 87	135,888 98	128,164 66	7,219 32
Skamania	17,159 66	16,668 26	14,051 16	7,433 04	31,210 81	24,101 30	7,109 51
Snohomish	165,708 11	164,807 82	116,282 21	98,867 56	281,990 82	258,675 38	23,314 94
Spokane	488,822 87	410,773 41	359,742 19	258,641 29	848,585 06	699,414 70	179,150 36
Stevens	48,006 89	48,041 56	34,122 17	18,055 43	82,129 06	66,096 98	16,032 08
Thurston	50,178 45	39,988 09	42,194 86	37,474 83	92,367 81	77,462 92	14,904 89
Wahkiakum	9,988 92	19	6,116 39	5,519 12	16,105 51	5,519 31	10,586 00
Walla Walla	133,846 06	133,367 83	90,450 23	50,332 02	224,296 29	184,199 85	40,096 44
Whatcom	125,846 07	89,142 30	85,989 16	108,658 29	211,835 23	192,800 59	18,534 64
Whitman	174,910 17	153,977 47	133,827 43	46,085 27	308,787 60	200,082 74	108,674 86
Yakima	152,272 70	130,482 11	91,585 07	70,124 19	243,857 77	200,606 30	43,251 47
Totals.....	\$4,129,108 32	\$3,623,007 09	\$2,967,867 87	\$2,024,029 68	\$7,086,965 69	\$5,646,086 77	\$1,450,968 92

* Amount is made up of State Aid balance from levies 1907, 1908, 1909 and 1910 plus Permanent Highway levies of 1911, 1912 and 1913, and interest credits. † Amount shown as expended does not include retained percentage on contracts nor any outstanding obligations. ‡ Includes credit from Public Highway fund, chapter 104, Laws 1912. § Balance available for construction but cannot be expended until paid into fund.

FINANCIAL STATEMENT PERMANENT HIGHWAY MAINTENANCE FUND.

COUNTIES	Total All Levies to May 1, 1915*	Total Expended May 1, 1915	5% Levies 1914 and 1915	Motor License Fund Oct. 1, 1915, and April 1, 1916	Expended May 1, 1915 to Sept. 30, 1916	Total Levies and Motor License Funds Sept. 30, 1916	Total Expended Sept. 30, 1916†	Balance Sept. 30, 1916 ‡
Adams	\$2,879 90	.....	\$3,288 70	\$7,580 90	\$2,454 44	\$13,729 50	\$2,454 44	\$11,275 06
Asotin	589 25	.....	585 35	1,837 63	1,081 48	2,512 23	1,081 48	1,430 75
Benton	1,928 30	.....	2,010 06	4,575 99	8,237 56	8,509 34	8,237 56	271 78
Chelan	2,174 95	.....	2,771 30	6,318 99	5,386 49	11,265 24	7,034 47	4,230 77
Clallam	1,246 90	\$1,640 98	1,858 80	4,240 90	4,992 89	7,846 00	5,981 33	1,865 27
Clarke	2,277 60	988 94	2,804 55	6,396 20	8,783 85	11,478 35	5,769 25	5,709 10
Columbia	2,277 60	2,085 40	2,804 55	3,254 30	1,243 45	5,787 85	1,464 96	4,322 90
Cowlitz	1,103 50	221 50	1,430 05	4,628 98	4,559 94	8,241 18	4,559 94	3,681 24
Douglas	1,578 95	.....	2,083 30	3,822 91	1,758 67	6,799 66	2,594 96	4,204 73
Ferry	1,800 40	836 26	1,676 35	1,076 08	1,627 20	1,928 08	1,723 20	204 88
Franklin	379 70	96 00	472 35	3,944 21	658 86	7,081 86	658 86	6,422 50
Garfield	1,379 70	.....	1,757 45	1,886 51	1,879 23	3,865 91	1,744 23	1,621 68
Grant	654 10	365 00	825 30	5,498 91	1,784 70	9,971 86	3,108 74	6,863 12
Grant	2,065 65	1,324 04	2,412 30	12,625 45	8,205 91	22,664 90	9,604 65	13,060 25
Grays Harbor	4,484 60	1,368 74	5,554 85	620 24	201 06	1,359 24	201 06	1,158 19
Island †	286 35	.....	452 65	2,492 71	3,578 38	4,496 36	4,418 38	77 98
Jefferson	909 40	840 00	1,094 25	84,318 99	71,017 74	151,121 19	99,172 16	51,949 03
King	29,858 45	28,154 42	36,943 75	2,234 96	3,611 07	4,047 86	3,611 07	4,298 29
Kitsap	834 60	.....	977 80	7,178 43	8,489 11	12,787 63	8,489 11	4,298 57
Kittitas	2,461 70	.....	3,152 50	4,796 91	8,245 46	8,624 96	8,602 06	22 96
Klickitat	1,710 75	356 57	2,117 30	8,236 96	6,420 72	14,626 53	9,028 33	5,598 26
Lewis	2,776 50	2,607 61	3,613 10	8,788 40	9,753 96	15,855 80	12,668 70	3,187 10
Lincoln	3,225 75	2,904 77	3,841 65	2,135 94	1,251 24	3,826 44	1,511 94	2,314 50
Mason	751 95	280 70	938 55	2,913 35	1,762 31	5,073 05	2,238 68	2,839 37
Okanogan	889 05	471 37	1,270 65	5,887 43	5,904 45	9,641 29	7,943 77	1,697 51
Pacific	1,967 15	2,089 32	2,346 70	2,214 45	3,051 95	4,043 15	3,258 45	784 70
Pend Oreille	851 55	206 50	977 15	30,121 25	29,720 26	54,922 00	33,008 59	21,913 41
Pierce	11,569 15	3,288 83	13,231 60	556 52	38 70	1,282 42	38 70	1,243 72
San Juan †	317 75	.....	408 15	7,495 06	2,592 08	13,111 61	3,174 99	9,936 62
Skagit	2,324 45	532 91	3,292 10	1,685 45	1,752 43	3,044 05	2,154 63	889 37
Skamania	620 90	402 25	787 70	13,902 47	17,725 91	25,167 42	22,559 39	2,608 03
Snobomish	5,164 30	4,833 43	6,100 65	42,863 24	56,155 43	77,034 89	70,591 01	6,443 88
Spokane	15,375 75	14,435 53	18,786 90	4,077 81	4,070 88	7,266 01	5,443 81	1,822 20
Stevens	1,400 45	1,872 93	1,787 75	5,083 80	3,676 39	9,000 95	5,931 53	3,069 42
Thurston	1,787 60	1,655 17	2,204 55	701 84	.....	1,278 29	.....	1,278 29
Wahkiakum	268 60	.....	207 86	10,883 80	10,022 14	19,533 39	13,904 23	5,629 16
Walla Walla	3,956 90	3,882 09	4,742 60	10,229 08	11,062 51	18,277 53	13,887 72	4,389 86
Whatcom	3,564 95	2,825 21	4,483 55	15,897 69	7,579 53	28,236 84	13,115 97	15,120 87
Whitman	5,353 90	5,536 44	6,986 25	10,961 20	7,219 35	20,075 20	7,489 72	12,585 48
Yakima	4,315 35	270 37	4,788 15	.....	.....	.....	.....	.....
Totals.....	\$126,542 25	\$85,832 83	\$155,082 55	\$632,791 00	\$332,014 16	\$684,415 80	\$407,847 04	\$226,568 76

* 5% of levies of 1911, 1912 and 1913. † Includes 5% of Public Highway fund, chapter 104, Laws 1913. ‡ Does not include any outstanding obligations. § Balance available for maintenance but cannot be expended until paid into the fund. ** Total expended \$71,088.06, refund, \$66.32.

STATEMENT OF ALL PERMANENT HIGHWAYS COMPLETED TO SEPTEMBER 30, 1916.

COUNTIES	April 1, 1911, to March 31, 1913		April 1, 1913, to March 31, 1915		April 1, 1915, to September 30, 1916		Totals	
	Miles	Cost	Miles	Cost	Miles	Cost	Miles	Cost
Adams	4.37	\$85,977 00	9.75	\$57,521 00	9.37	\$41,268 00	23.49	\$184,766 00
Asotin								
Benton	5.09	15,779 00	5.00	16,996 00	13.67	45,016 00	23.76	77,790 00
Chelan	3.43	18,090 00	2.70	20,121 00	6.13	54,722 00	12.31	92,983 00
Clallam	1.00	9,913 00	4.41	24,215 00	7.15	17,580 00	12.56	51,709 00
Clarke	2.30	12,354 00	4.66	60,121 00	5.00	39,489 00	11.96	111,964 00
Columbia			5.70	23,506 00	3.00	13,940 00	8.70	37,445 00
Cowlitz					4.80	61,744 00	4.80	61,744 00
Douglas			5.16	35,132 00	2.75	17,985 00	7.91	53,167 00
Ferry			1.73	3,700 00	1.06	4,300 00	2.84	13,000 00
Franklin	3.00	21,904 00	2.00	25,896 00			5.00	47,799 00
Garfield			1.00	12,123 00			4.00	21,378 00
Grant	14.49	62,484 00			13.59	31,353 00	28.08	93,837 00
Grays Harbor	7.46	29,976 00			20.36	62,359 00	38.82	155,690 00
Island			11.00	63,325 00	1.00	2,716 00	4.00	10,537 00
Jefferson			3.00	7,371 00	1.50	11,330 00	6.50	33,890 00
King	13.47	130,013 00	20.71	556,390 00	43.80	338,106 00	77.98	1,084,514 00
Kitsap			2.03	24,055 00	2.10	12,558 00	4.13	36,613 00
Kittitas	1.70	13,835 00	15.75	55,597 00	9.25	33,256 00	26.70	107,688 00
Klickitat			2.10	24,303 00	3.20	47,006 00	5.30	71,314 00
Lewis	2.23	33,023 00	2.50	30,732 00	5.11	60,493 00	9.89	124,303 00
Lincoln	3.67	16,327 00	13.13	66,706 00	12.53	46,717 00	29.33	130,247 00
Mason	1.00	7,169 00	1.03	7,100 00	2.90	19,174 00	4.93	33,443 00
Okanogan	1.00	4,193 00	5.23	9,103 00	19.77	30,222 00	26.00	43,523 00
Pacific	1.33	7,399 00	3.16	31,927 00	8.42	40,534 00	12.91	79,390 00
Pend Oreille			3.30	17,315 00	7.79	22,375 00	11.09	40,690 00
Pierce			27.39	342,697 00	6.80	101,949 00	34.69	444,646 00
San Juan			1.03	4,120 00	2.03	7,336 00	3.09	11,956 00
Skagit			7.70	69,696 00	4.03	47,415 00	11.73	117,111 00
Skamania			3.64	16,330 00	1.10	7,433 00	4.74	23,763 00
Snohomish	12.30	26,227 00	13.35	133,431 00	13.66	33,332 00	45.31	243,590 00
Spokane	24.53	126,391 00	29.24	252,320 00	26.66	226,253 00	80.43	605,464 00
Stevens			11.43	37,934 00	2.50	10,055 00	13.93	48,089 00
Thurston	4.50	10,549 00	3.60	14,307 00	6.52	35,997 00	14.62	61,413 00
Wahkiakum								
Walla Walla	2.42	20,394 00	13.62	98,640 00	10.66	50,079 00	31.70	164,613 00
Whatcom			3.30	45,774 00	16.66	143,725 00	19.96	194,499 00
Whitman	4.00	41,529 00	12.73	110,635 00	3.32	30,375 00	20.55	191,539 00
Yakima	9.56	39,233 00	19.30	75,322 00	13.37	74,355 00	47.73	189,410 00
Totals.....	123.45	\$749,274 00	233.03	\$2,403,706 00	330.09	\$1,397,397 00	726.57	\$5,055,376 00

STATEMENT SHOWING KIND OF SURFACE ON PERMANENT HIGHWAYS COMPLETED TO SEPT. 30, 1916.

COUNTIES	Concrete	Brick	Sheet Asphalt	Warrenite	Bitulithic	Asphaltic Macadam	Water-bound Macadam	Gravel or Crushed Rock	Total Miles
Adams .....	.....	.....	.....	.....	.....	6.76	.....	16.74	23.49
Asotin .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Benton .....	.....	.....	.....	.....	.....	.....	2.67	26.09	28.76
Chelan .....	.....	.....	.....	.....	.....	.....	.....	12.31	12.31
Clallam .....	.....	.....	.....	.....	.....	.....	.....	12.56	12.56
Clarke	2.89	.....	.....	1.80	.....	.....	5.00	2.80	11.96
Columbia .....	.....	.....	.....	.....	.....	.....	8.70	.....	8.70
Cowlitz	1.80	.....	.....	.....	.....	2.50	.....	1.00	4.80
Douglas .....	.....	.....	.....	.....	.....	.....	3.66	4.25	7.91
Ferry .....	.....	.....	.....	.....	.....	.....	.....	2.84	2.84
Franklin	3.00	.....	.....	.....	.....	2.00	.....	.....	5.00
Garfield .....	.....	.....	.....	.....	.....	.....	1.00	3.00	4.00
Grant .....	.....	.....	.....	.....	.....	.....	.....	28.06	28.06
Grays Harbor	5.40	.....	1.36	.....	.....	.....	.....	32.06	33.82
Island .....	.....	.....	.....	.....	.....	.....	.....	4.00	4.00
Jefferson .....	.....	.....	.....	.....	.....	.....	.....	6.50	6.50
King	3.50	20.71	.....	2.50	.....	7.72	.....	43.55	77.93
Kitsap .....	.....	.....	.....	.....	.....	.....	.....	4.18	4.18
Kittitas	1.70	1.20	.....	.....	.....	.....	.....	23.80	26.70
Klickitat .....	.....	.....	.....	.....	.....	3.80	.....	.....	5.90
Lewis	8.89	.....	.....	.....	.....	.....	.....	.....	9.89
Lincoln	0.50	.....	.....	.....	.....	.....	16.80	12.53	29.33
Mason .....	.....	.....	.....	.....	.....	.....	.....	4.93	4.93
Okanogan .....	.....	.....	.....	.....	.....	.....	.....	26.00	26.00
Pacific	1.16	.....	.....	.....	.....	.....	11.75	.....	12.91
Pend Oreille .....	.....	.....	.....	.....	.....	.....	.....	11.09	11.09
Pierce	23.92	.....	3.97	.....	6.80	.....	.....	.....	34.69
San Juan .....	.....	.....	.....	.....	.....	.....	.....	3.09	3.09
Skagit	7.73	.....	.....	.....	.....	.....	4.00	.....	11.73
Skamania .....	.....	.....	.....	.....	.....	.....	.....	4.74	4.74
Snobomish	5.89	1.02	.....	.....	.....	35.05	.....	38.40	45.31
Spokane .....	.....	.....	.....	1.37	.....	.....	22.66	21.35	50.43
Stevens .....	.....	.....	.....	.....	.....	.....	.....	13.98	13.98
Thurston .....	.....	.....	.....	.....	.....	.....	.....	14.62	14.62
Wahkiakum .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Walla Walla .....	.....	.....	.....	.....	.....	3.00	22.78	5.92	31.70
Whatcom	9.30	.....	.....	.....	.....	.....	.....	10.66	19.96
Whitman .....	.....	.....	.....	.....	.....	18.11	2.44	.....	20.55
Yakima .....	.....	.....	.....	.....	.....	6.66	12.85	28.82	47.73
Totals.....	74.65	22.93	5.33	5.67	6.80	84.99	116.91	421.29	736.57

PERMANENT HIGHWAYS COMPLETED TO SEPT. 30, 1916, ON ROUTE OF STATE HIGHWAYS.

COUNTIES	Central Wash- ington High- way	Inland Em- pire High- way	Inland Em- pire High- way Eastern Route	McCl- elan Pass Highway	National Park Highway	Olym- pic High- way	Pacific High- way	Sunset High- way	North Central High- way	State Road No. 4	State Road No. 7	State Road No. 8	State Road No. 10	State Road No. 12	State Road No. 15	State Road No. 23	Total
Adams
Asotin
Benton	16.84	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	16.84
Chelan	4.00	.....	.....	1.00	.....	.....	.....	.....	.....	5.00
Clallam	2.10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2.10
Clarke	5.66	.....	.....	.....	.....	1.10	.....	.....	.....	.....	6.76
Columbia	4.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8.70
Cowlitz	4.70	.....	.....	.....	.....	3.50	.....	.....	.....	.....	.....	.....	.....	1.80	.....	4.80
Douglas	6.41	.....	.....	.....	.....	.....	.....	.....	.....	6.41
Ferry	2.84
Franklin
Garfield	4.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4.00
Grant	11.09	11.21	.....	.....	.....	.....	.....	.....	.....	22.30
Grays Harbor	31.22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	31.22
Island
Jefferson
King	3.50	9.25	7.90	.....	.....	.....	.....	.....	.....	.....	.....	3.50
Kitsap	17.50
Kittitas	2.00	.....	.....	.....	.....	.....	14.05	.....	.....	.....	.....	.....	.....	.....	.....	.....
Klickitat	16.05
Lewis	9.89	.....	.....	.....	.....	4.30	.....	.....	.....	.....	4.30
Lincoln	16.20	13.13	.....	.....	.....	.....	.....	.....	.....	9.89
Mason	4.98	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	29.83
Okanogan	4.98
Pacific	11.91	.....	.....	.....	.....	.....	.....	.....	14.76	4.63	.....	.....	19.39
Pend Oreille	11.91
Pierce	11.84	.....	12.58	.....	.....	.....	.....	.....	.....	.....	.....	3.10	8.10
San Juan	23.92
Skagit
Skamania
Snohomish	12.80	.....	.....	.....	.....	.....	.....	.....	.....	.....	4.74
Spokane	19.76	.....	.....	.....	.....	.....	24.07	.....	.....	.....	.....	.....	.....	.....	.....	12.80
Stevens	2.50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8.65	47.48
Thurston	4.00	8.62	.....	.....	.....	.....	.....	.....	.....	.....	.....	2.50
Wahkiakum	12.62
Walla Walla	24.66	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Whatcom	2.70	.....	.....	.....	.....	.....	.....	.....	.....	.....	24.66
Whitman	4.51	5.82	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2.70
Yakima	18.27	.....	8.51	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10.63
Totals	96.54	13.38	8.51	23.25	45.80	65.00	88.72	24.34	2.84	1.00	10.14	14.76	4.63	1.80	6.75	399.70

PERMANENT HIGHWAY CONTRACTS COMPLETED FROM APRIL 1, 1915, TO SEPTEMBER 30, 1916.

COUNTIES	Concrete		Asphalt		Bitulithic		Asphaltic Concrete		Asphaltic Macadam		Waterbound Macadam		Gravel or Crushed Rock		TOTALS	
	Miles	Cost	Miles	Cost	Miles	Cost	Miles	Cost	Miles	Cost	Miles	Cost	Miles	Cost	Miles	Cost
Adams	9.37	\$41,268	9.37	\$41,268
Asotin
Benton	18.67	45,016	18.67	45,016
Chelan	6.13	54,722	6.13	54,722
Clallam	7.15	17,580	7.15	17,580
Clarke
Columbia
Cowlitz	1.30	\$10,440	.....	.....	.....	.....	.....	.....	2.50	\$39,676	.....	.....	1.00	11,628	4.80	61,744
Douglas	2.75	17,985	2.75	17,985
Ferry	1.06	4,800	1.06	4,800
Franklin
Garfield
Grant
Grays Harbor	1.00	\$14,500	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Island
Jefferson
King	3.50	44,148	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kitsap
Kittitas
Klickitat	2.20	34,612	.....	.....	.....	.....	.....	.....
Lewis	3.61	54,418	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lincoln
Mason
Okanogan
Pacific
Pend Oreille
Pierce	6.80	\$101,949	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan
Skagit	4.08	47,415	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Skamania
Snohomish	1.06	14,974	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Spokane
Stevens
Thurston
Wahkiakum
Walla Walla
Whatecom	6.00	82,024	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Whitman
Yakima
Totals	19.50	\$258,414	1.00	\$14,500	6.80	\$101,949	2.28	\$12,916	28.86	\$619,866	34.08	\$189,752	287.58	\$1,005,500	330.09	\$1,897,897

Section Four

STATE QUARRIES

The history of the installation and operation of the five rock quarries owned by the state has been outlined to a certain extent in each the third, fourth and fifth biennial reports of the State Highway Commissioner. It is desirable at this time, however, to make a brief review of the various phases of the operation of the quarries, which may have some bearing on the future policy to be pursued in the operation of them.

Chapter 226, Laws of 1907, provided for the installation and operation of rock crushing plants in different sections of the state, and the state geologist was authorized and directed to select sites where suitable rock could be obtained. The following sites were selected and approved: Fidalgo in Skagit county, Meskill in Lewis county, Dixie in Walla Walla county, Selah in Yakima county and Marshall in Spokane county.

Plans were prepared and contracts for machinery and materials for plants at Fidalgo, Meskill, Selah and Marshall were awarded in May, 1909, by the board of control.

In November, 1909, the handling of the quarries was placed in the hands of the Highway Commissioner.

In October, 1910, at the request of the Highway Commissioner the quarries were again placed in the hands of the board of control.

During the 1909-10 biennium, \$124,000 was appropriated for construction and operation of the quarries. The appropriation was inadequate to complete the work outlined, Meskill and Fidalgo only, being placed in operation during that time.

The 1911 legislature appropriated the following sums:

For Selah, Dixie and Marshall.....	\$100,000 00
For Meskill	35,000 00

On April 1st, 1911, by action of the legislature the management of the quarries was transferred from the board of control to the Highway Commissioner. At this time Fidalgo was the

only one of the five plants which had been completed. However, a small crushing plant belonging to Lewis county was in operation by the state at Meskill, the work on the present plant having been started in August, 1911.

At Selah the crushing plant was only partly installed.

At Dixie nothing had been done in the way of construction.

At Marshall quarry, construction was about as far advanced as at Selah.

Operation was started at the various quarries on the following dates: Meskill, May, 1910; Fidalgo, August, 1910; Selah, June, 1911; Marshall, April, 1912; Dixie, April, 1912.

To obtain power to operate the quarries, money was advanced by the state to build four power lines. These are the property of the companies furnishing power, and the money so advanced is repaid to the state by a rebate of 25 per cent on monthly power bills. On September 30th, 1916, the accounts for these sums advanced stand as follows:

Quarry	Amt. Advanced	Credits from Rebate	Balance
Meskill	\$4,000 00	\$1,912 99	\$2,087 01
Selah	2,600 82	514 24	2,086 58
Dixie	3,040 41	591 51	2,448 90
Marshall	5,000 00	68 97	4,931 03

The prospect of the state ever receiving credit for the amounts advanced seems doubtful.

The general plan of construction is practically the same at the five institutions. Owing to the prospective demand for crushed rock, the plan at the time was evidently to construct permanent plants. Where possible, all heavy machinery is set on concrete foundations. The bunkers, with the exception of Fidalgo, where water is the only means of transportation, are located so as to discharge by gravity, directly into the railroad cars stored on the quarry sidings.

The main crushers are No. 6 Austin gyratory type and auxiliary crushers of the same type are provided to reduce the oversized material.

Electricity is used as the motive power at all plants, and each machine is driven by an individual motor. Air compressor plants

provide power for the Burley drills in all pits with the exception of Dixie, where coyote holes are driven by hand.

All buildings are of frame construction throughout, with the exception of the power house at Fidalgo, which is covered with corrugated galvanized sheet iron. All camp buildings are well constructed, sealed, painted and electrically lighted. The quarters for the convicts are surrounded by a stockade, a portion of which is formed by one side of the two-story building containing the office, commissary and the free employees' quarters. The convict quarters are one story structures, and include two bunk houses, lobby, dining room, kitchen, pantry, laundry, meathouse, drying room, dungeons, and, like the free employees' quarters, toilets and bath. In addition to the above mentioned buildings, superintendents' cottages of the same general construction are provided at Dixie, Selah, Marshall and Meskill. Water under pressure is piped to all parts of the camps and sewer systems provide the necessary sanitation.

The quarries are now self-sustaining institutions, there being no appropriations except the rotary fund, which is established by the legislature, and which is credited with the sale of all products from all the institutions, and from which all costs of operation, maintenance and improvements are paid.

The organization at the quarries, when running at full capacity, consists of seven free men and about thirty-four convicts.

The institutions serve as parole camps for the convicts employed in them. A credit of one year's time is extended to the men for nine months' service. Under the "indeterminate sentence law" convicts are given a minimum and a maximum term, and the plan is to place such convicts in the service as will have served their minimum sentences by the time their nine months of service expires and will be eligible to discharge at the expiration of that time.

Upon requisition from the Highway Department, the prison board selects such men as are eligible and desire to accept the conditions controlling the quarry service.

The men are well fed, comfortably clothed, and provided with well-equipped, sanitary quarters.

In general, the men prefer to serve in the quarry rather than in the penitentiary, and the results of their labor show a marked degree of efficiency.

The original plan followed in the construction of the five state quarries was to furnish rock at a low cost for the construction of state and state aid roads. The specifications being written by the Highway Department provided for the use of all sizes of rock in the proportions produced. Since the completion of the plants, the state aid law has been abolished, and the permanent highway law substituted in the place of same, and little surfacing has been done on state roads by the state.

The permanent highway law places the construction of such roads under the control of the various county authorities. All quarries, with the exception of Fidalgo, are located along the line of the Northern Pacific railway, and that company tenders a special rate of one cent per ton per mile for the first fifty miles, and $\frac{3}{4}$ of a cent per ton per mile thereafter until a rate of 75 cents is reached. For the distances in excess of 100 miles, a straight rate of $\frac{3}{4}$ cent per ton per mile applies, and \$5.00 is the minimum rate.

But even with this special rate, the transportation cost limits the zone in which the quarry product can be profitably used, and as an economic measure, many counties have installed their own crushing plants, and are also surfacing with gravel.

The plants as originally designed, each produced about 250 cubic yards per day in the following sizes and proportions:

No. 1	1½ inches to 3 inches.....	55 per cent
No. 2	¾ inch to 1½ inches.....	25 per cent.
No. 3	Dust to ¾ inch.....	20 per cent

Counties using the state quarry products have changed the constructive methods and use only a small proportion of the largest sized material.

Heretofore a greater percentage of the smaller sizes of rock was obtained by closing the openings of the crusher and

re-crushing as much of the number one rock and over-sized material as possible by passing it through the auxilliary crusher. However, there is practically no demand for No. 1 rock any more. The orders received are for about equal quantities of No. 2 and No. 3 rock. In order to meet the demand for the smaller sizes of rock during the present biennium, it has been necessary to install crushing rolls at the Meskill and Dixie quarries. The rock chutes have been rearranged so that either the No. 1 or No. 2, or over-flow, as desired may be run through the rolls. In this way the output of the various sizes may be regulated as required, but with the production of a greater percentage of the smaller sizes of rock, the capacity of the plant has been reduced to about 200 cubic yards per day.

It is possible to pass about 100 cubic yards of No. 1 rock (passing through a three-inch screen) through the rolls per day of eight hours, the finished product giving about equal percentages of No. 2 and No. 3 rock. Unless there is an over supply of No. 2 rock, it does not pay to run this size through the rolls inasmuch as the additional amount of No. 3 rock obtained by doing so is very small. With the installation of the rolls, we are able to supply the quantity of No. 3 rock demanded for road work.

Of the five quarries, Meskill and Dixie are the only ones that have been in operation during the present biennium. Dixie quarry was closed on September 30th, 1915. Meskill will probably be closed for some time during the present winter when orders are all filled. The future of these two quarries, the only ones which have been operated successfully, is apparently a matter of conjecture, and depends entirely upon the demands of the territory in their immediate vicinity.

During the period of suspended operation the small and spasmodic demands for the products of Fidalgo, Marshall and Selah, have not justified their operation. Watchmen, whose salaries are paid from the rotary fund, at the expense of the operating plants, are employed at Marshall and Fidalgo.

The following is a brief description of the five state quarries:

FIDALGO.

This institution is located on Deception Pass, on the south side of Fidalgo Island, in Skagit county. The grounds, which are about 34 acres in area, are leased from the war department of the Federal government. The quarry is located about 100 feet above the water in the face of a very steep cliff. The power plant, stockade, offices, etc., are located about 2,000 feet east of the quarry on a bench averaging about 50 feet above the water's elevation. There are no wagon or railroads leading to this institution and the only transportation facility is by the waters of Puget Sound.

The rock is crushed at the pit and delivered by means of a chute to the screen house below, where it is sorted into the various sizes and delivered to the storage bunker located at the water's edge.

The storage bunker is divided into five compartments and has a capacity of 2,500 cubic yards. Each compartment is provided with two outlet spouts which discharge onto a loading device which is designed so as to be moved along the front of the bunker from one compartment to another. This loader, provided with an endless belt arrangement, discharges the rock onto the scows lying in deep water.

All the machinery at the quarry is driven by electric motors. The power is generated by a three-phase, 100-kilowatt generator, which is driven by a 16x24-inch simple non-condensing Corliss engine and transmitted to the quarry at a distance of about 2,000 feet. A 26,000 gallon reinforced concrete tank holds the supply of fuel oil for the 150-horsepower tubular boiler.

Compressed air is piped 2,000 feet to the pit from the compressor for the operation of the drills. To facilitate loading of shipment for interior points, an electrically operated clam shell bucket was installed at the Milwaukee Railway Company's terminal dock in Seattle.

The quarters within the stockade are equipped for the accommodation of seventy convicts, and the institution is equipped in every detail.

The cliff to the rear of the crusher-house rises to an almost perpendicular height of 130 feet, and is separated from the face of the main rock body by a crevasse, the bottom of which is about 40 feet above the elevation of the crusher. Large quantities of rock have become detached and fallen into the crevasse and it appears that it is only a question of time before the whole mass will slip into the bay carrying the entire plant with it. The plant has been idle since December, 1912, and as it now stands, its natural tendency is a constant physical depreciation.

The sum of \$79,009.46 was expended on this institution prior to operation and the total receipts from the sale of its products are \$27,554.17.

MESKILL.

This plant is located on the South Bend branch of the Northern Pacific railway, thirteen miles west of Chehalis in Lewis county on the northern bank of the Chehalis river.

The quarry grounds originally belonged to Lewis county, but were donated to the state on April 1st, 1911, and in that year the legislature appropriated \$35,000.00 for the erection of a new plant.

The power is furnished by the Washington-Oregon Corporation at a rate of two cents per kilowatt hour. The state contributed \$4,000 toward the cost of the construction of a transmission line and a contract with the power company provides for a refund of 30 per cent. of the monthly power bills.

The camp is equipped for the accommodation of forty-eight convicts. The property consists of an area of 160 acres which is heavily timbered and covered with brush.

The floor of the quarry pit is about 14 feet above the elevation of the railway track and it is necessary to elevate the crushed material to the screening house. The bunkers have a

storage capacity of 760 cubic yards. Owing to the lay of the land surrounding the quarry, the maximum depth of the face of the pit is about 60 feet. The over-burden averages about 6 feet in depth and requires the continuous employment of two or more men for its removal.

Up to this time the institution has operated at a profit. In order to meet the present demands of the summer season for No. 2 and No. 3 rock crushing rolls have been installed to handle the oversize and surplus supply of No. 1 rock.

Since the completion of the plant, the total receipts and accounts receivable for crushed rock up to the close of the biennium amounted to \$131,739.17. The sum of \$47,475.67 was expended in the construction of this institution prior to the beginning of operation.

SELAH.

This institution is located in Yakima county just east of the village of Selah on the main line of the Northern Pacific railway. The state owns the quarry site which consists of an area of 18.65 acres. The camp site is located about three-eighths of a mile west of the crushing plant and is constructed upon right-of-way leased from the Northern Pacific Railway Company.

The quarry is located in the south bluff of the Yakima river, the steep slope of which gives a deep face to the pit and permits blasting by the coyote hole method.

The floor of the quarry pit is about 80 feet above the elevation of the railway company's tracks and the plant is constructed so as to eliminate the use of elevators. The material, when once placed in the primary crusher, passes by gravity through the various screens, auxiliary crusher, and bunkers to the cars. The bunker is divided into five compartments with a combined capacity of 760 cubic yards.

The power is furnished by the Pacific Power & Light Company, and the transmission line was built by that company at

a cost of \$2,600 and was paid for by the state. The contract provides for the furnishing of light and power at the rate of $2\frac{1}{2}$ cents per kilowatt hour and the repayment to the state at the rate of 25 per cent of monthly bills.

Owing to lack of orders it has not been operated since September, 1913.

Since the completion of the plant, the total receipts for crushed rock up to the close of the biennium amounted to \$32,714.51. The cost of construction prior to the beginning of operation was \$51,847.58.

MARSHALL.

This institution is located on a spur track of the Palouse branch of the Northern Pacific railway about one and one-half miles south of Marshall Junction in Spokane county. The site, consisting of 41 acres, was purchased by Spokane county and deeded to the state.

The floor of the quarry is about 13 feet above the track and it is necessary to elevate the crushed material to the screening-house. The bunker is divided into five compartments, the combined capacity of which is 412 cubic yards. The power line was built by the Washington Water Power Company at a cost to the state of \$5,000.00. A contract with that company provides for the payment of $2\frac{1}{2}$ c per kilowatt hour for power and light, and a rebate of 25 per cent of monthly power bills to the state for money advanced for construction of the line.

The construction of the plant is the same as outlined under the general description of the quarries and the camp which is located on a hill about one-fourth of a mile northeast of the quarry is equipped for the accommodation of forty-eight convicts.

At the time this plant was constructed it was contemplated that Spokane county and city would be its principal support, but orders from those places have not materialized and the

plant has operated but little since its completion, the same being idle since April 30, 1912.

Since the completion of the plant, the total sales of the products thereof amount to \$4,497.44.

The cost of the plant prior to the beginning of operation was \$37,929.36.

DIXIE.

The Dixie institution is located in Walla Walla county, eleven miles northeast of Walla Walla, at Dixie, on the Dayton branch of the Northern Pacific railway.

The site, consisting of 17.14 acres, was purchased by the state. The pit is located in the side of a very steep hill which gives great depth of face to the quarry and permits economic blasting by the coyote hole method. The camp is equipped for the accommodation of 48 convicts.

The floor of the quarry is level with the railway track and all material is elevated to the screens. The bunker is divided into three compartments with a combined capacity of 450 cubic yards.

The power and light is furnished by the Pacific Power and Light Company at a rate of 2½c per kilowatt hour. The power line cost \$6,080.82, the state paying half of same. A contract with the power company provides for a reimbursement of 25 per cent of the monthly power bills.

Walla Walla county has used the greatest portion of its products.

Since the completion of the plant, the total receipts and accounts receivable for crushed rock up to the close of the biennium amounted to \$55,496.63. The cost of the plant prior to the beginning of operation was \$42,737.93.

STATEMENT OF \$100,000.00 QUARRY ROTARY FUND.

Appropriation		\$100,000 00
Expended up to Oct. 1, 1916.....	\$45,435 79	
Accounts payable Oct. 1, 1916.....	5,059 28	
Total expended and obligated, Oct. 1, 1916.....		50,495 07
Balance		\$49,504 93

OPERATION OF ROTARY FUND.

OCTOBER 1, 1914, TO APRIL 1, 1915.

Net cash balance on hand, state treasurer, Oct. 1, 1914.....	\$26,183 54	
Deposited with treasurer Oct. 1, 1914 to April 1, 1915.....	15,162 69	
Total credit April 1, 1915.....		\$41,346 23
Cost of operation, Oct. 1, 1914, to April 1, 1915.....		15,418 08
Net cash balance on hand, state treasurer, April 1, 1915..		\$25,928 15

APRIL 1, 1915, TO OCTOBER 1, 1916.

Net balance on hand state treasurer, April 1, as per above statement	\$25,928 15	
Deposited with treasurer, April 1, 1915, to Oct. 1, 1916	48,567 56	
Total credit Oct. 1, 1916.....		\$69,495 71
Cost of operation, April 1, 1915, to Oct. 1, 1916:		
Salaries and wages.....	\$18,256 30	
Subsistence	6,907 98	
Clothing and shoes	1,332 82	
General supplies and expense quarry.....	1,610 80	
Power, light and heat.....	3,217 73	
Repairs and tools	5,647 48	
Powder and blasting supplies.....	2,363 02	
Medical and surgical.....	481 36	
Escapes	211 79	
Transportation of convicts.....	1,926 51	
General expense, Olympia.....	2,131 68	
Permanent improvements	3,750 46	
Total		47,837 91
Net cash balance on hand, state treasurer, Oct. 1, 1916...		\$21,657 80
Checks and warrants on hand and at bank for collection.....		861 00
Accounts receivable		3,649 30
Total resources		\$26,168 10

Liabilities—Accounts Payable.

Meskill Quarry	\$1,087 26	
Dixie Quarry	3,842 02	
Selah Quarry		
Fidalgo Quarry	70 00	
Marshall Quarry	60 00	
		5,059 28
Net resources rotary fund.....		\$21,108 82

COST OF OPERATION.

OCTOBER 1, 1914, TO SEPTEMBER 30, 1915.

CLASSIFICATION	Fidalgo	Meacham	Selah	Marshall	Dixie	Total
Salaries and wages.....	\$1,535 00	\$11,454 06	\$1,050 00	\$1,440 00	\$9,807 18	\$24,476 24
Substance .....	.....	6,178 96	.....	.....	3,308 82	9,387 28
Clothing and shoes.....	.....	1,953 71	.....	.....	577 82	1,981 53
General expense quarry.....	186 00	1,848 08	51 00	21 02	543 07	2,119 12
Power, light and heat.....	.....	2,774 97	34 22	.....	1,094 31	4,506 50
Repairs and tools.....	44 50	5,006 96	.....	.....	2,736 01	7,587 46
Powder and blasting supplies.....	.....	1,973 86	.....	.....	903 20	2,885 06
Medical and surgical.....	.....	535 36	.....	.....	73 20	608 56
Escapes .....	.....	272 89	.....	.....	302 98	575 82
.....	.....	1,216 26	.....	.....	72 01	1,288 27
.....	.....	1,444 01	98 11	.....	1,316 76	2,758 86
.....	76 86	4,277 39	.....	.....	535 50	4,889 77
Totals.....	\$1,512 36	\$27,750 96	\$1,828 23	\$1,461 02	\$20,573 21	\$58,255 99

PERIOD OF OPERATION.

OCTOBER 1, 1914, TO SEPTEMBER 30, 1916.

QUARRY	Time in Operation	Time Operation Suspended	Per Cent. Time Operating
Fidalgo	No months	24 months	No
Meskill	24 months	No months	100
Selah	No months	24 months	No
Dixie	12 months	12 months	50
Marshall	No months	24 months	No

PRODUCTION.

OCTOBER 1, 1914, TO SEPTEMBER 30, 1916.

QUARRY	No. 1	No. 2	No. 3	Nos. 1 and 2	Nos. 2 and 3	R. R.	Total
Fidalgo							
Meskill	7,845	24,147	12,783	1,679.08	714	462	47,130.08
Selah						16	16
Dixie	15,468	9,298	9,823				34,584
Marshall							
Totals.....	22,813	33,440	22,606	1,679.08	714	478	81,730.08

In order to obtain a comprehensive idea of the standing of the quarries in a financial way, and the degree of success as a business venture, a complete statement of the appropriations, receipts, and expenditures from the passage of the act in 1909, providing for the installation and operation of the rock-crushing plants, to date, has been prepared.

COST OF CONSTRUCTION OF QUARRIES.

FROM APRIL 1, 1909, TO MARCH 31, 1913.

	Appropriation	Expended	Reverted
General fund, 1909.....	\$24,000 00	\$24,000 00	.....
Highway fund, 1909.....	100,000 00	100,000 00	.....
Field examination, 1909.....	5,000 00	890 67	\$4,109 33
Highway fund, 1911.....	135,000 00	135,000 00	.....
	\$264,000 00	\$259,890 67	\$4,109 33

EXPENDITURES SEGREGATED AS FOLLOWS:

QUARRY	Field Examina- tions, 1909	General Fund 1909	Highway Fund 1909	Highway Fund 1911	Total
Fidalgo .....	.....	\$12,322 78	\$65,579 15	\$1,107 58	\$79,009 46
Meakill .....	.....	3,100 74	9,375 98	35,000 00	47,475 67
Selah .....	.....	3,800 71	12,798 95	35,238 92	51,847 58
Marshall .....	.....	4,005 27	11,749 11	21,484 98	37,229 36
Dixie .....	.....	71 50	497 86	42,168 57	42,737 93
Common to all.....	\$890 67	.....	.....	.....	890 67
Total.....	\$890 67	\$24,000 00	\$100,000 00	\$135,000 00	\$259,890 67

